APPENDIX B WETLAND DELINEATION, ST. MARIES RIVER STUDY AREAS

## WETLAND DELINEATION FOR ST. MARIES RIVER STUDY AREAS Emerald Creek Garnet, LTD.

Benewah and Shoshone Counties, Idaho

Prepared for:

Emerald Creek Garnet, LTD. PO Box 190 Fernwood Idaho [83830] 208-245-2096 Prepared by:

SELKIRK ENVIRONMENTAL PO Box 219 Cocolalla Idaho [83813] 208-683-8201

September 7, 1999 Revised February 2002 This wetland delineation has been completed by SELKIRK ENVIRONMENTAL, a small business with twelve years experience in evaluation of terrestrial and aquatic ecosystems. The above consulting firm has provided professional services that are in accordance with that degree of care and skill generally accepted in the nature of the work performed.

Mr. Tom Duebendorfer, Wetland Scientist, assisted in completion of field studies on this project, and prepared a plant species list for use in completing field data sheets.

As a pertinent part of a joint application with the State of Idaho and the US Army Corps of Engineers (Corps), this document must be reviewed and approved by permitting agencies. Wetland boundaries and wetland functional value assessment must be approved by the appropriate Federal, State, and local jurisdictions during the course of permitting.

Although this report and incorporated materials are not copyrighted, SELKIRK ENVIRONMENTAL anticipates that professional ethics prevent the duplication of this report or portions thereof without prior approval of the author. Emerald Creek Garnet, LTD, and the Corps have permission to duplicate this report, as needed, for any requirement relative to permitting additional mining areas within the described study areas.

Mike Carroll
SELKIRK ENVIRONMENTAL
Biologist/Soil Scientist

OVERVIEW		
Project Area		1
Project Description		1
Purpose		1
INVESTIGATION FINDINGS		
Preliminary Findings		4
County Soil Survey		4
National Wetland Inventory		6
Aerial Photography		. 6
Historical Perspective		6
Site-specific Findings		8 8
Vegetation		10
Soils		11
Hydrology		1 '
WETLAND DETERMINATION		
Determination Rationale		14
Wetland Descriptions		14
FUNCTION AND VALUE ASSESSMENT		18
LIST OF FIGURES		
Figure 1: Vicinity Map		2
Figure 2: Project Area Map		3
Figure 3: County Soils Map		5
Figure 4: National Wetland Inventory Map		7
Figure 5: Groundwater Monitoring Sites		13
Figure 6: Wetland Delineation Map - small scale	•	
Figure 6A: Wetland Delineation Map - large scale		attached
APPENDICES		Α
Appendix R: Delineation Methodology		A B
Appendix B: Delineation Methodology  Appendix C: Groundwater Well Data		D
Appendix C. Groundwater Well Data Appendix D: Delineation Field Data Sheets		E
Appendix B: Beilineation Field Bala cheets  Appendix E: Function and Value Methodology		F
Appendix E: Function and Value Work Sheets		J

### PROJECT AREA

At the request of Emerald Creek Garnet, LTD. (ECG), a wetland delineation has been completed in seven study areas on approximately 355 acres along the St. Maries River, near Fernwood, Idaho, in Benewah and Shoshone Counties (Figure 1).

The location and extent of the study areas have been based on a reserve report prepared by DDH Geomanagement, LTD. The reserve report identified minable gamet reserves throughout the study areas. The seven study areas include the active floodplain of the river southwest of Highway 3, and the historic floodplain and non-floodplain areas northeast of Highway 3 (Figure 2).

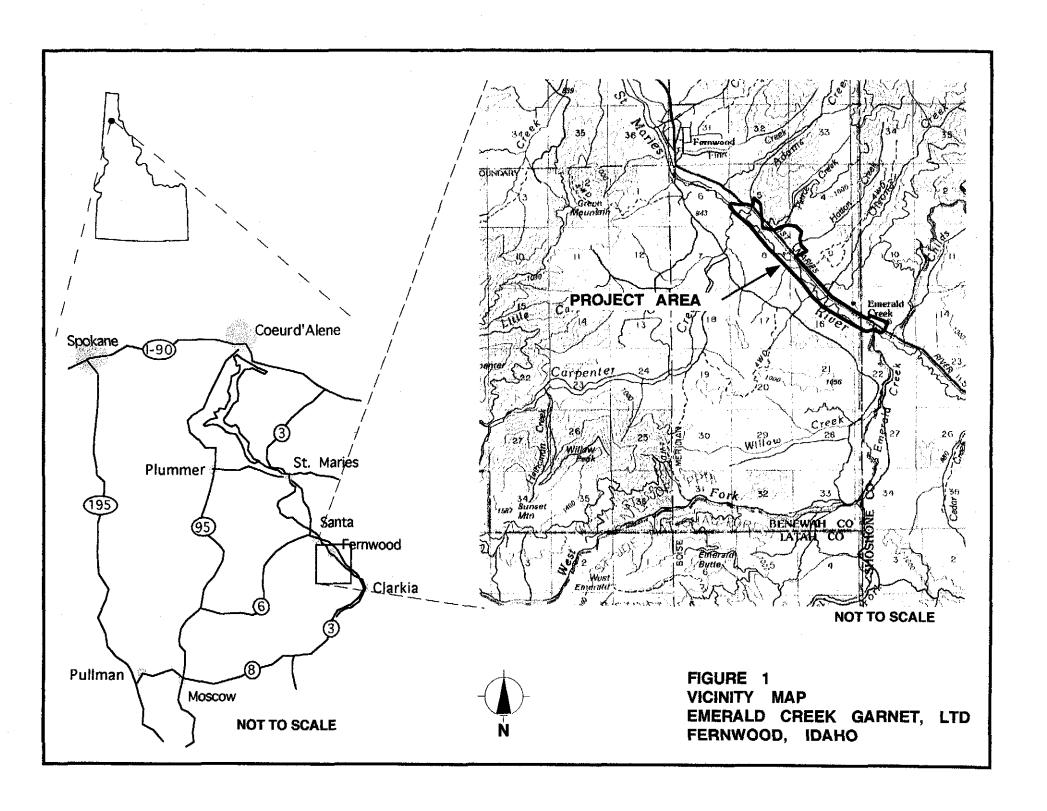
Seven study areas comprise 355.8 acres adjacent to and near the St. Maries River between Emerald and Carpenter creeks. The St. Maries River empties into the St. Joe River approximately 35 river miles downstream of the study areas. The St. Joe River empties into the south end of Lake Coeur d'Alene.

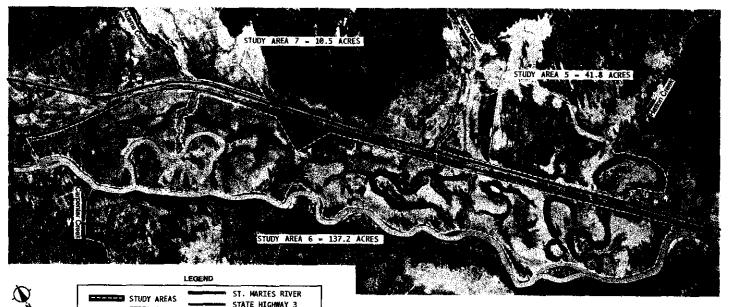
### PROJECT DESCRIPTION

ECG proposes to dredge mine alluvial deposits of industrial grade garnet that have been proven in the study areas. Dredge mining garnet involves constructing Best Management Practices (BMP's), stockpiling topsoil and overburden, and excavating a garnet-rich alluvial layer. The garnet material is concentrated on- and off-site in a series of trommel, jig, and mill operations. Overburden and topsoil are replaced, and the mined area is regraded and planted. This dredge activity is relatively shallow as the garnet bearing layers lie within 16 feet of the soil surface. Garnet would be mined incrementally, with 10 to 25 acres per year mined and reclaimed over the tollowing one to two years.

### **PURPOSE**

The purpose of this report is to provide ECG a detailed wetland determination that will satisfy the requirements of the US Army Corps of Engineers' (COE) 404 permit requirements as well as State of Idaho Dredge Mining Permit requirements. To meet those requirements, this report contains a wetland delineation of all wetlands within the seven study areas, and a wetland evaluation method to assess the value of all identified wetlands.



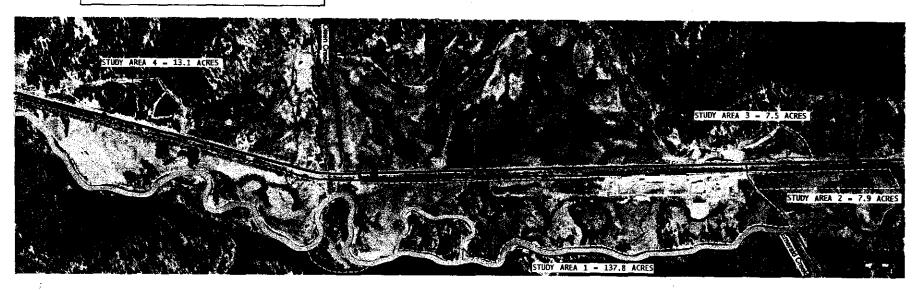


TOTAL STUDY AREA EXTENT = 356.8 ACRES

---- STREAMS

STATE HIGHWAY 3 ST. MARIES RAILROAD

SCALE: 1 inch = 700 feet



Identification of wetlands involves reviewing preliminary data from diverse sources and collecting site-specific data on vegetation, soils, and hydrology.

### PRELIMINARY FINDINGS

The following sources of pertinent background information were reviewed to assist in site-specific studies.

### **County Soil Survey**

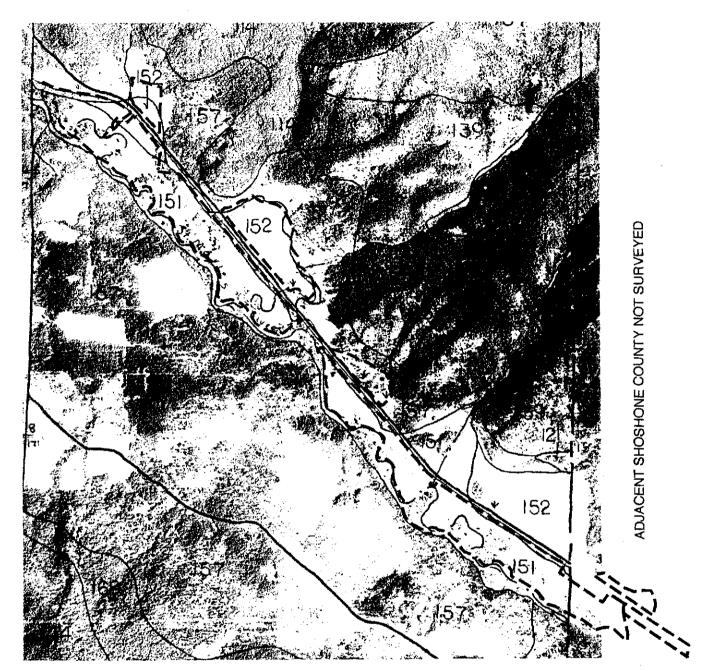
A published soil survey for this portion of Benewah and Shoshone counties is not available. Soils within the general area were preliminarily mapped by the USDA Natural Resource Conservation Service (NRCS) in the early 1990's. This information is available in draft form from the NRCS. Three soil map units were identified within the study areas, including (Figure 3).

- Map Unit 151 Pokey-Typic Fluvaquents complex, 0 to 4 percent slope
- Map Unit 152 Clarkia silt loam, 0 to 2 percent slope
- Map Unit 157 Reggear silt loam, 3 to 20 percent slope

Map Unit 151 is 50 percent Pokey, 35 percent Typic Fluvaquents, and 15 percent contrasting inclusions. Pokey is a somewhat poorly drained soil formed in mixed alluvium on floodplains and low stream terraces. Typically, the surface horizon is a grayish brown (10YR 5/2) loam to 15 inches. The subsurface horizon is a pale brown (10YR 6/3) and light gray (10YR 7/2) loam and very fine sandy loam to 27 inches. The subsoil is a mottled light brownish gray (10YR 6/2) and light gray (10YR 7/2) loamy sand and coarse sand to more than 60 inches. Permeability is moderate in the upper 27 inches and rapid to very rapid below 27 inches. A seasonally high water table from 18 to 30 inches is present from February through June. Pokey is considered non-hydric by Hydric Soils of the United States (NTCHS 1995).

Typic Fluvaquents are very poorly drained soils formed in mixed alluvium in depressions and channels of floodplains, and on low stream terraces. Typically, the surface horizon is a mottled light brownish gray (10YR 6/2) fine sandy loam to 3 inches. The upper subsoil is a mottled light brownish gray (10YR 6/2) and light olive gray (5Y 6/2) stratified silt loam and loamy coarse sand to 37 inches. The lower subsoil is a light gray (10YR 7/1) stratified gravely coarse sand and extremely gravely coarse sand to 60 inches. Permeability is moderate in the upper 37 inches and very rapid below 37 inches. A seasonally high water table from 0 to 18 inches is present from February through June. Typic Fluvaquents are considered non-hydric by Hydric Soils of the United States (NTCHS 1995). Included in this map unit may be up to 15 percent contrasting inclusions. Non-hydric Clarkia, and hydric Mazie and Aquic Udifluvents are the potential inclusions.

Map unit 152 is 85 percent Clarkia and 15 percent contrasting inclusions. Clarkia is a poorly drained soil formed in mixed alluvium on floodplains, drainage ways, and low stream terraces. Typically, the surface horizon is a greyish brown (10YR 5/2) silt loam to 8 inches. The upper subsurface is a light yellowish brown (10YR 6/4) silt loam to 15 inches. The lower subsurface is a mottled very pale brown and white (10YR 7/3 and 8/2) silty day loam to 32 inches. The subsoil is a mottled white and light gray (10YR 8/2 and 7/2) silty day loam to 60 inches. Permeability is moderately slow. A seasonally high water table from 18 to 24 inches is present from February through June. Clarkia is considered non-hydric by Hydric Soils of the United States (NTCHS 1995). Included in this map unit may be up to 15 percent contrasting inclusions. Non-hydric Pokey and Helmer, and hydric Mazie are the potential inclusions.



Map Unit 151 - Pokey-Typic Fluvaquents complex, 0 to 4 % slope

Map Unit 152 - Clarkia silt loam, 0 to 2 % slope Map Unit 157 - Reggear silt loam, 3 to 20 % slope



1:24000

1995 Hydric Soils

Pokey; non-hydric Fluvaquents; hydric Clarkia; non-hydric Reggear; non-hydric FIGURE 3 COUNTY SOILS MAP EMERALD CREEK GARNET, LTD FERNWOOD, IDAHO

FROM: USDA Natural Resources Conservation Service, unpublished soil survey.

Map unit 157 is 85 percent Reggear and 15 percent contrasting inclusions. Reggear is a moderately well drained soil formed in loess deposits with minor amounts of volcanic ash on terraces. Typically, the surface horizon is a greyish brown (10YR 5/2) and yellowish brown (10YR 6/3) silt loam to 11 inches. The upper subsurface is a light yellowish brown (10YR 6/4) silt loam to 18 inches. The lower subsurface is a mixed light yellowish brown (10YR 6/4) and very pale brown (10YR 6/5) silt loam to 24 inches. The subsoil is a mixed light brown and very pale brown dense silty clay loam to 60 inches. Permeability is very slow. A seasonally perched water table from 18 to 36 inches is present from February through April. Reggear is considered non-hydric by Hydric Soils of the United States (NTCHS 1995). Included in this map unit may be up to 15 percent contrasting inclusions. Non-hydric Helmer, Sly, Agatha, Bobbitt, and Clarkia are the potential inclusions.

### **National Wetland Inventory**

US Fish and Wildlife Service (FWS) has conducted an inventory of wetlands using remote sensing and aerial photograph interpretation. Their National Wetland Inventory (NWI) has identified the following wetlands in the study areas (Figure 4);

- PEM1A palustrine emergent, persistent, temporarily flooded,
- PEM1C palustrine emergent, persistent, seasonally flooded,
- PSS1A palustrine scrub-shrub, broad leaved deciduous, temporarily flooded,
- PSS1C palustrine scrub-shrub, broad leaved deciduous, seasonally flooded,
- PFO1C palustrine forested, broad leaved deciduous, seasonally flooded, and
- R3OWH riverine upper perennial, open water, permanently flooded.

The identified wetlands form an intricate, interdependent pattern across the floodplain landscape. The wetlands identified by NMI often vary from site-specific wetland delineations because FWS has used a two-parameter definition of wetlands (the COE uses a three-parameter definition), and because the inventoried wetlands are rarely verified on-site.

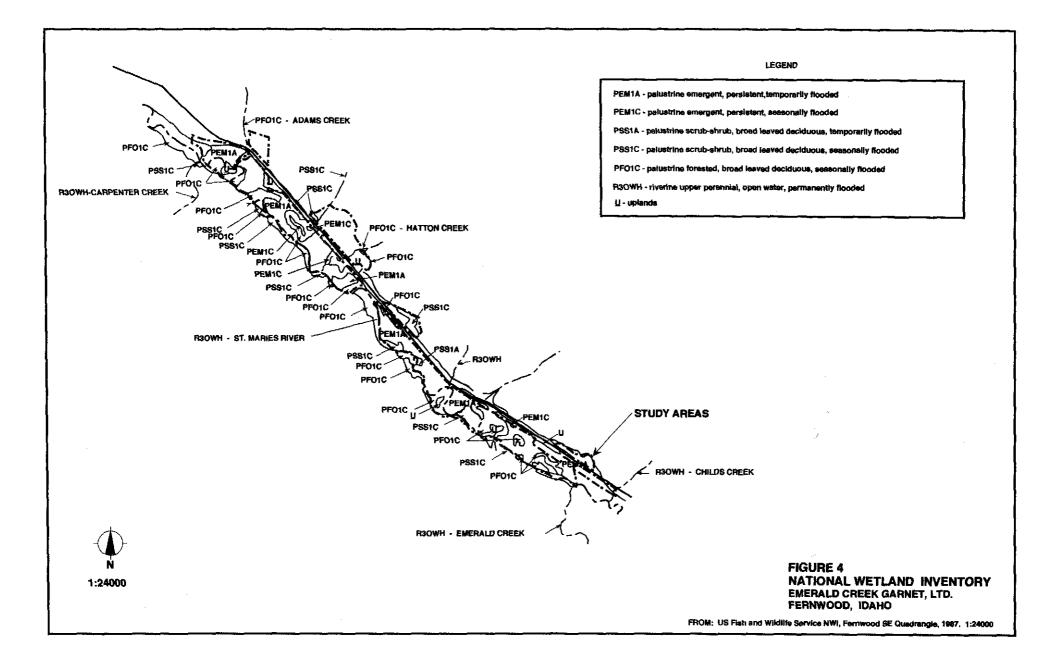
### **Aerial Photography**

The study areas were flown and aerial photographs taken in March 1995. Color aerials were developed at a scale of 1:15,840 for use in completing mining feasibility studies along the St. Maries River. Copies of these photos were used in the field for identifying and delineating wetlands and other important ecological features. The photos were also used as a base for wetland mapping in this report. Photographs were scanned on an Epson ES-800C scanner. Scanned images were imported into Canvas 3.5.5, arranged into a mosaic, and adjusted to provide a usable scale.

### **Historical Perspective**

In addition to these three sources of information, the historical/cultural perspective of this geographic area is an important factor to consider when evaluating current site conditions. Natural and man-induced disturbances have had a significant role in these study areas. Logging, wild fires, agricultural practices, and livestock grazing the past 100 years have all influenced the plant communities and hydrology of these areas.

Logging activities started in the St. Maries basin in the late 1800's and was accelerated in the early 1900's following large wildfires. Logging removed the mature forest from the floodplains of the St. Maries River. Railroads were built along and across the floodplains. Creek water was diverted into sluices to transport logs. Splash dams were constructed along major rivers (including the St. Maries) and streams to impound water and hold logs. Dam floodgates were opened and a wall of water and logs rushed downstream, scouring the streambed and floodplain of substrate and woody material.



Extensive forest fires in 1912 severely altered the ecosystems of northern Idaho. Pictures from the 1920's show hill upon hill of standing dead and bare ground. Eighty-five years later, steep south-facing slopes are still heavily brushed and devoid of trees. Logging activities increased after the fires to salvage the standing dead, leaving little but bare ground for several years. Pictures from the late-1920's and 1930's show the same hills completely denuded.

Although studies on the quantitative effects of fires and logging may be available, it is easy to see the relatively catastrophic impacts associated with these disturbances. In general, the abrupt loss of vegetation promoted a marked increase in surface run-off into the St. Maries River and its tributaries. With this increased run-off and bare soil came an increased sediment load that promoted increased stream channel scour and eventual deposition. In these situations, stream channels frequently downcut from increased volume and bedload, becoming incised over time, and unable to access the floodplain. High flows associated with splash dams exacerbated channel degradation.

Vegetation in the floodplain recovered to some degree after salvage logging ended in the mid-1930's. Cottonwood became established as the dominant floodplain tree, and shrubs probably became the dominate vegetation. The demand for agricultural products during and after World War II initiated cattle grazing and farming of the St. Maries floodplain. Benewah and Shoshone counties are open range counties. Cattle have grazed the forests, meadows, and riparian areas annually for more than 50 years. Aerial photographs from 1955 show that extensive flat areas of the floodplain were annually cut for hay crops. In the 1990's, mechanical cropping is no longer occurring in the floodplains, but open range cattle grazing continues. Cattle grazing occurs annually from late May through October. Open range laws require very little monitoring of grazing, allowing cattle to concentrate in the floodplains and riparian corridors throughout the grazing season.

Most ecological viewpoints might consider cattle grazing a perturbation to the system being studied. That viewpoint is misleading, in this case. Cattle have been a constant, integral, and influential aspect of the St. Maries floodplain since salvage logging and splash dams ended in the mid-1930's. The extensive fires and salvage logging were events that severely setback the successional stage of the St. Maries riparian corridor. With the end of salvage logging, secondary succession initiated changes to the riparian areas, including the re-establishment of woody vegetation. This is supported by today's cottonwood having an average age of 70 years. Cattle were introduced into the riparian area as succession occurred. In this respect, cattle have been, and continue to be, an attribute of the riparian areas that is not easily separable from other successional attributes.

### SITE-SPECIFIC FINDINGS

The following site-specific data were collected in over 200 hours of site investigation conducted in 1997 and 1998. The study areas were assessed throughout the 1998 growing season. Hydrology was directly observed in May and June, plant species and associations were identified in June, July, and August, and soil characteristics were described in August. Additionally, shallow groundwater monitoring sites were established and groundwater was monitored from November 1998 through June 1999. Observations were recorded at 55 circular data plots, each one-hundredth acre (0.01) in size. Field data sheets are found in Appendix D.

### Vegetation

The riparian system adjacent to the St. Maries River is an interwoven complex of meadow, shrub, and forested plant communities. The present day communities are a reflection the historic natural and cultural disturbances described above. These disturbances have led to removal of woody vegetation, ditching, seeding, and cropping throughout most of the study areas. Typical floodplain geofluvial processes have also affected vegetation. They have created a varied micro-relief within the floodplain with numerous depressions, swales, historic channels, and truncated oxbows. This has led to a complex of varied plant associations described below.

### Meadow Vegetation

Meadow vegetation varies from dry meadow to permanently inundated emergent channels and oxbows. Numerous plant associations have been identified in this community. The associations appear to occur on the landscape in direct response to micro-relief and hydrologic conditions.

The Foxtail-Fescue Association is dominated by meadow foxtail (Alopecurus pratensis - FACW), red fescue (Festuca rubra - FAC), and bentgrass (Agrostis stolonitera (FAC) with lesser amounts of quackgrass (Agropyron repens - FAC-), orchardgrass (Dactylis glomerata - FACU), and timothy (Phleum pratense - FAC-). Invasive and early seral species are present where the effects of grazing are greatest. These forbs include dandelion (Taraxacum officinale - FACU), white clover (Trifolium repens - FAC), oxeye daisy (Chrysanthemum leucanthemum - UPL), and tansy (Tanacetum vulgare - NI). Meadow foxtail has been extensively seeded for pasture improvement. This association is found on relative topographic highs that are dry early in the growing season. It is found throughout the study areas where woody vegetation has been removed and converted to hay crops or pastures. This association is dominated by Facultative (FAC) and Facultative Upland (FACU) species, and is considered non-hydrophytic in most locations.

The Foxtail-Canarygrass Association is dominated by meadow foxtail and reed canarygrass (*Phalaris arundinacea* - FACW) with lesser amounts of timothy, inflated sedge (*Carex vesicaria* - OBL), bentgrass, and white clover. Meadow foxtail has been extensively seeded for pasture improvement. This association is found in pastures, and in shallow depressions and swales. This association is dominated by Facultative Wetland (FACW) species, and is considered hydrophytic.

The Sedge-Water Plantain Association is dominated by water sedge (Carex aquatilis - OBL), big leaf sedge (Carex amplifolia - OBL), and American water plantain (Alisma plantago-aquatica -OBL) with lesser amounts of tufted hairgrass (Deschampsia caespitosa - FACW), giant burreed (Sparganium eurycarpum - OBL), creeping foxtail (Alopecurus geniculatus - OBL), fowl mannagrass (Glyceria striata - OBL), common cattail (Typha latifolia - OBL), and pondweed (Potomageton amplifolius - OBL). This association is found in deeper swales and depressions that hold water at least half of the growing season. It is dominated by FACW and Obligate Wetland (OBL) species and is considered hydrophytic.

The <u>Cattail-Sedge Association</u> is dominated by common cattail, water sedge, and big leaf sedge with lesser amounts of fowl mannagrass, pondweed, and burreed. This association is found in deeper and/or isolated swales and oxbows that retain some standing water throughout the growing season. It is dominated by OBL species and is considered hydrophytic.

### Shrub Vegetation

Shrub vegetation is found along the perimeter of well defined swales, depressions, and oxbows, and in uneven surfaces that have been scoured by flood flows. Two shrub associations have been identified in this community, each occurring on the landscape in response to different hydrologic conditions.

The <u>Hawthorne/Canarygrass</u> Association has a shrub layer dominated by Douglas' hawthorne (*Crataegus douglasii* -FAC) with lesser amounts of sapling black cottonwood (*Populus balsamitera* - FAC), red-osier dogwood (*Cornus sericea* -FACW), woods rose (*Rosa woodsii* -FAC-), and snowberry (*Symphoricarpos albus* -FACU). The ground layer is dominated by reed canarygrass with lesser amounts bentgrass, bluegrass (*Poa* spp. -FAC), white clover, and bracken fem (*Pteridium aquilinum* - FACU). This association is found adjacent to emergent swales and depressions and on uneven ground that is frequently scoured by flood flows. This community is dominated by FAC species and is considered hydrophytic.

The <u>Dogwood/Sedge Association</u> has a shrub layer dominated by red-osier dogwood and willows (Salix exigua, S. scouleriana - OBL, FAC) with lesser amounts of hawthorne, white alder (Alnus incana - FACW), and spirea (Spiraea douglasii - FACW) and cottonwood saplings. The ground layer is dominated by big leaf sedge and water sedge with lesser amounts of reed canarygrass, and fowl mannagrass. This association is found in shallow depressions and swales, on the edge of deeper swales and oxbows, and on gravel bars and low benches near the river's edge. It is dominated by FACW and OBL species and is considered hydrophytic.

### Forested Vegetation

A forested plant community is found in patches throughout the study areas. Typically, two forested associations are present, one deciduous, the second coniferous.

The Cottonwood/Snowberry/Canarygrass Association has an overstory layer dominated by black cottonwood. In a few places, aspen (Populus tremula - FAC+) replaces cottonwood. The shrub layer is dominated by sapling cottonwood and snowberry with lesser amounts of woods rose and hawthorne. The ground layer is dominated by reed canarygrass and other representatives of the Hawthorne/Canarygrass Association. This association is found on uneven topographic highs that are scoured by flood flows, or are adjacent to depressions and swales. It is dominated by FAC species in most situations and is considered hydrophytic.

The <u>Cedar/Snowberry/Bentgrass Association</u> has an overstory layer dominated by western red cedar (*Thuja plicata* - FAC) with lesser amounts of lodgepole pine (*Pinus contorta* - FAC), subalpine fir (*Abies lasiocarpa* - FACU), and Englemann spruce (*Picea englemannii* - FAC). The shrub layer is dominated by snowberry with lesser amounts of woods rose. The ground layer is dominated by scattered bentgrass and bluegrass. This association is found on level topographic highs. It is dominated by FAC and FACU species and is considered non-hydrophytic.

### Soils

Site-specific soils were examined at 55 data plots throughout the study areas. Soil logs were advanced to a depth of 15 to 20 inches to determine hydric conditions at and immediately below the root zone. Soils were not examined to a sufficient depth to correlate observed soils to mapped soil series. Data sheets in Appendix D show site-specific soils information. Soils were considered hydric where long-term ponding was observed in June 1998, satisfying Hydric Soil Criteria 3 (USDA 1995). Soils were also considered hydric where evidence of reducing conditions (redoximorphic features) was observed below the root zone in soil logs in August 1998. In general, three types of soils were observed, two non-hydric and one hydric.

Non-hydric soils were observed on relative topographic highs and on flat areas within the active floodplain area. These soils were most often sandy near the surface and gravely or cobbly at depth. These soils lacked redoximorphic features. The relatively coarse texture provides a permeability that precludes the development of reducing conditions. The relatively high topographic position provides no flood, or infrequent, short-term flood conditions.

Non-hydric soils were also identified on relative topographic highs northeast of the highway in historic floodplain and non-floodplain areas. These soils were most often sitty near the surface and clayey at depth. These soils lacked redoximorphic features near the surface. The clayey subsoil promotes aquic conditions, but not reducing conditions near the surface. The relatively high topographic position provides no flood, or infrequent, short-term flood conditions.

Hydric soils were observed on topographic lows in the active floodplain and on flats in historic floodplain areas northeast of the highway. These soils had redoximorphic near or at the soil surface. They were also inundated during the early part of the growing season. Inundation was supplied by flood waters, stormwaters, and seasonally high groundwater.

### Hydrology

Direct observation of hydrology was made in June 1998. At this time the St. Maries River was at bankful width, and all swales, depressions, and oxbows within the floodplain were at storage capacity. Wetland hydrology was observed over extensive portions of the study areas at this time. Observed hydrology comes from one of four sources; flood waters, river normal high flows, precipitation, and seasonally high groundwater.

The St. Maries River historically floods during January and February rain-on-snow events (Reeves 1999). This cyclic period provides a necessary hydrologic regime to sustain wetlands. Although flood periods usually occur out of the growing season, these floods provide a recharge of deeper aquatic habitats that are permanently, semi-permanently, and seasonally inundated. The truncated depressions and oxbows remain at storage capacity until evaporation and decreasing groundwater levels allow varying degrees of water loss. Swales and oxbows that have a surface connection to the river at normal high flows, drain as the river depths drop to low flow conditions in the early summer.

The St. Maries River typically experiences normal high flow conditions in March, through early June (Reeves 1999). High flow periods extend well into the growing season and provide hydrology for varying durations, depending upon floodplain accessibility. These flows also recharge deeper aquatic habitats that act as high flow channels during normal run-off periods. Hydrology from this source is maintained until the river depths drop to low flow conditions in the early summer.

Precipitation from storm events also provides wetland hydrology. This hydrologic support is important to shallow depressions that are isolated from flood flows and high flows, and are too shallow for seasonally high groundwater. This source of hydrology may not be apparent in dry spring months as observed in the 1999 hydrologic cycle. By June first, flood flows had not occurred and precipitation was below average. The St. Maries River remained at bankful discharge for over eight weeks without flooding. Depressions and oxbows that were accessible to high flows were inundated. However, many depressions that were inundated in the June 1998 were not saturated in early June 1999. Thus, spring precipitation is an important source of wetland hydrology for shallowly inundated and saturated wetlands.

Wetland hydrology also occurs from seasonally shallow groundwater. The NRCS has identified the following shallow groundwater conditions for each mapped soil;

- Pokey: 18 to 30 inches February through June; 30 to> 60 inches remainder of year,
- Typic Fluvaquents: 0 to 18 inches February through June; 18 to > 60 inches remainder of year,
- Clarkia: 18 to 24 inches February through June; 24 to > 60 inches remainder of year,
- Reggear: 18 to 36 inches February through April.

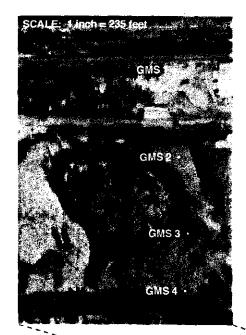
Four groundwater monitoring sites were identified to measure typical groundwater fluctuations over a hydrologic cycle (see Appendix C for data). Monitoring sites were established at four locations in upland, wetland, and river top-of-bank areas in the Pokey - Typic Fluvaquents Complex (Figure 5). Four-inch perforated pipe was installed to a depth equaling the depth of the Lake Clarkia clays using a mechanical augur. Perforated pipe was placed in the holes and sealed with bentonite clay. The pipes were back flushed and allowed to stabilize before readings were taken. Depth to shallow groundwater was measured weekly by ECG's Environmental Specialist.

Groundwater levels varied with topographic position just before and during the early portion of the growing season. Between March 19 and May 8, 1999, groundwater levels in topographic lows varied from 0 to 17 inches. At the same time, groundwater levels in topographic highs varied from 20 to 42 inches. This data suggests that shallow groundwater contributes to wetland hydrology early in the growing season in topographic lows, including swales, depressions, and oxbows. Shallow groundwater does not appear to provide wetland hydrology in topographic high positions within the floodplain area. This interpretation is qualified by a relatively dry spring and a slow, gentle run-off period that lacked any type of long-term flood event. However, this interpretation is supported

by the presence and depth of redoximorphic features found in soil logs for these topographic positions.

In actuality, the hydrologic contributions described above cannot be so easily separated. They may interact uniquely over a period of years with varied flood flows, varied spring precipitation, and longer-term wet-dry cycles. Cumulatively, however, they provide a relatively predictable pattern of wetland hydrology at least 5 out of 10 years. That pattern is one of seasonally inundated oxbows, high flow channels, and deeper depressions and swales. The shallower depressions and swales will be inundated in springs with normal precipitation, much like 1998. In drier springs, such as 1999, shallower depressions and swales may lack wetland hydrology, or may only be saturated.

The net result is a diverse complex of hydrologic regimes within the active and historic floodplains. Saturated, seasonally flooded, semi-permanently flooded, and permanently flooded regimes all occur in a matrix within these study areas.



### LEGEND

STUDY AREAS ST. MARIES RIVER
STATE HIGHWAY 3
ST. MARIES RAILROAD

### DEPTH TO GROUNDWATER (Inches)

SITE	EL.	HAB'T	12-2	12-10	12-17	12-28	01-7	01-13	01-22	10-28	02-5 0	2-12	02-22	03-5	03-12	03-19	03-26
GMS 1	995.9	UPL	47	40	38	43	43	34	13	34	35	32	30	26	27	28	29
GMS 2	994.6	UPL	46	41	38	36	32	30	22	28	44	30	31	19	20	21	18
GMS 3	992.6	PEM1E	31	28	25	20	23	20	12	18	22	20	22	04	07	08	02
GMS 4	992.7	T-O-B	43	36	34	19	31	28	22	30	32	30	32	16	17	18	UW*
SITE	EL.	HABT	04-2	04-9	04-17	04-23	04-30	05-8	05-15	05-21	05-28	06-4	06-1	1 06-1	8 06-2	25	
GMS 1	995.9	UPL	27	26	36	40	42	41		42	43	46	47	52	55		
GMS 2	994.6	UPL	20	19	31	33	36	36		40	41	42	44	45	48		
GMS 3	992.6	PEMIE	05	04	16	13	16	17		21	22	24	25	27	30		
GMS 4	992.7	T-O-B	28	27	20	09	17	20		21	19	21	22	30	30		
"UW = un	der water																



A wetland determination was made based on both preliminary and site-specific findings. Jurisdictional wetlands were identified using the following rationale.

### **DETERMINATION RATIONALE**

The following rationale was used in making this determination.

Hydrophytic vegetation was determined present where the following plant associations were identified;

- Foxtail-Canarygrass Association,
- Sedge-Water plantain Association,
- · Cattail-Sedge Association,
- Hawthorne/Canarygrass Association,
- Dogwood/Sedge Association, and
- Cottonwood/Snowberry/Canarygrass Association.

Hydric soils were determined present where the following soil conditions were identified;

- · where long-term ponding was observed in June 1998, satisfying Hydric Soil Criteria 3, and
- where evidence of reducing conditions (redoximorphic features) was observed below the root zone in soil logs in August 1998.

Wetland hydrology was determined present where the following conditions were identified;

where direct observation of saturation and ponding in June 1998 was determined to be present for at least 6
consecutive days (5% of the growing season).

Wetlands were determined to be present where hydrophytic vegetation, hydric soils, and wetland hydrology were found to be simultaneously present during the growing season. Descriptions of these wetlands follows.

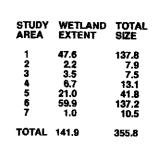
### **WETLAND DESCRIPTIONS**

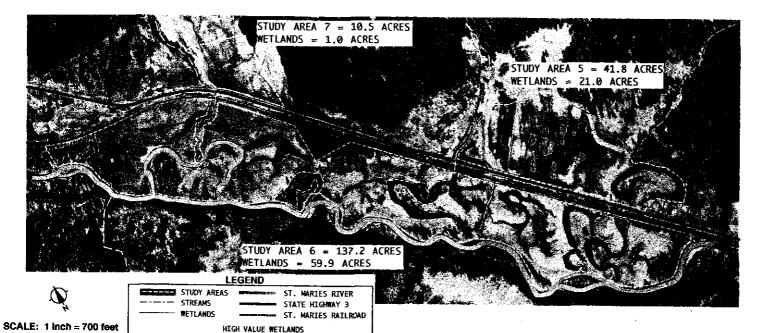
Wetlands, totaling 141.9 acres, were identified in the seven study areas (Figure 6 - small scale; Figure 6A - large scale). The identified wetlands form a mosaic of habitats across the landscape with emergent, scrub-shrub, and forested wetland components occurring in saturated, short-term inundated, semi-permanently inundated, and permanently inundated hydrologic conditions. Because of the complex nature of these wetlands, the best way to describe them is by utilizing the USFWS classification scheme (Cowardin et. al., 1979).

### PEM1E Wetlands

These are palustrine emergent, persistent, seasonally flooded and saturated wetlands. They are the most prominent wetland in the study areas, totaling 54.7 acres, or 38.5 percent of the identified wetlands. These wetlands are represented by two different plant associations. The Foxtail-Fescue Association is found in shallow depressions and swales where typical inundation is 0 to 12 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and during the early portion of the growing season. The Foxtail-Canarygrass Association is found in deeper depressions and swales where typical inundation is 6 to 18 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and during the early portion of the growing season. These wetlands typically become dry during early summer (end of June) and lack wetland hydrology the remainder of the growing season.









### PEM1Ef Wetlands

These are palustrine emergent, persistent, seasonally flooded and saturated wetlands that are farmed. 'Farmed' is defined by FWS as alteration of soil surface for production of crops. These are the second most prominent wetland in the study areas, totaling 22.0 acres, or 15.5 percent of the identified wetlands. These wetlands are represented by the Foxtail-Fescue Association, and are found in shallow depressions and swales where typical inundation is 0 to 12 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and during the early portion of the growing season. These wetlands typically become dry during early summer (end of June) and lack wetland hydrology the remainder of the growing season.

### PEM1F Wetlands

These are palustrine emergent, persistent, semi-permanently flooded wetlands. They are a small component of the identified wetlands, totaling 6.1 acres, or 4.3 percent. These wetlands are represented by the Sedge-Water plantain Association, and are found in deeper swales and oxbows where typical inundation is 12 to 48 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and extends well into the hot summer months, but becomes dry before the end of the growing season.

### **PEM1H Wetlands**

These are palustrine emergent, persistent, permanently flooded wetlands. These form a small wetland component in the study areas, totaling 4.3 acres, or 3.0 percent. They are represented by the Cattail-Sedge Association, and are found in the deepest swales and oxbows where typical inundation is 24 to 48 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and extends throughout the growing season.

### **PSS1E Wetlands**

These are palustrine scrub-shrub, deciduous, seasonally flooded and saturated wetlands. They total 33.2 acres, or 23.4 percent of the overall wetlands. These wetlands are represented by the Hawthorne/Canarygrass Association, and are found in shallow depressions and uneven, scoured topographic highs where typical inundation is 0 to 12 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and during the early portion of the growing season. These wetlands typically become dry during early summer (end of June) and lack wetland hydrology the remainder of the growing season.

### **PSS1F Wetlands**

These are palustrine scrub-shrub, deciduous, semi-permanently flooded wetlands. They are a small component of the identified wetlands, totaling 2.9 acres, or 2.0 percent. These wetlands are represented by the Dogwood/Sedge Association, and are found in swales, oxbow edges, and along the river margin where typical inundation is 6 to 24 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and extends well into the hot summer months, but becomes dry before the end of the growing season.

### PF01E Wetlands

These are palustrine forested, deciduous, seasonally flooded and saturated wetlands. They total 17.6 acres, or 12.4 percent of the overall wetlands. These wetlands are represented by the

Cottonwood/Snowberry/Canarygrass Association, and are found on uneven, scoured topographic highs where typical inundation is 0 to 12 inches. Wetland hydrology in this association is present in the spring, prior to the growing season, and during the early portion of the growing season. These wetlands typically become dry during early summer (end of June) and lack wetland hydrology the remainder of the growing season.

### POWH Wetlands

These are palustrine open water, permanently flooded wetlands. They are the smallest wetland component found in the study areas, totaling 1.1 acres, or 0.8 percent of the overall wetlands. They are not vegetated. They typically are inundated more than 48 inches. Wetland hydrology is present in the spring, prior to the growing season, and extends throughout the growing season.

Except for the farmed wetlands, the wetlands described above are not separate wetlands, isolated from each other. They are components of one wetland system that extends the entire length of the study areas. They are separated physically in some areas by meadow and forested uplands. The wetlands are hydrologically linked seasonally by flood flows. The farmed wetlands are isolated from the other wetlands by highway and rail line berms. The following table summarizes the identified wetlands.

### **Wetland Summary Chart**

Wetland	Acreage	Inundation	Dominant Plant Species
open water, permanently flooded - POWH	1.1	48+ in.	n/a
emergent, seasonally flooded/saturated - PEMIE	54.7	0 - 12 in.	Alpr, Agst, Feru, Phar, Cave,
		6 - 18 in.	Caam, Caaq, Phar
emergent, semi-permanently flooded - PEM1F	6.1	12 - 48 in.	Cave, Caaq, Caam, Phar
emergent, permanently flooded - PEM1H	4.3	24 - 48 in.	Cave, Tyla, Nulu, Speu
emergent, farmed - PEMIf	22.0	0 - 12 in.	Alpr, Agre, Phar, Feru, Cave
scrub-shrub, seasonally flooded/saturated - PSSIE	33.2	0 - 12 in.	Crdo, Poba saplings, Agst, Phar
scrub-shrub, semi-permanently flooded - PSS1F	2.9	6 - 24 in.	Alin, Salix, Caag, Cave, Phar
forested, seasonally flooded/saturated - PFO1E	17.6	0 - 12 in.	Poba, Crdo, Phar, Agst, Syal
TOTAL WETLANDS	141.9	2 4 4 4 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	

Wetlands are known to perform important functions that provide both environmental and social benefits. Adamus (1983) and Reppert (1979) have recognized several important wetland functions, including shoreline protection, hydrologic support, storm and flood water abatement, groundwater exchange, water quality improvement, and natural biologic functions. Appendix E contains a descriptive synthesis of Adamus' and Reppert's concepts.

SELKIRK ENVIRONMENTAL completed function and value work sheets for each wetland habitat during field studies. These work sheets are found in Appendix F. The wetland habitats identified earlier by FWS nomenclature were used as wetland components for this assessment. The following table outlines wetland functional values based on the concepts in Appendix E and on field data in Appendix D. The determination of low, moderate, or high is made by a simple analysis of the majority of boxes checked on the field forms. No attempt was made to weigh wetland functions or field observations as to relative importance.

### Water Quality Shoreline Hydrologic Storm/Flood Groundwater Biologic Wetland Support **Abatement** Exchange improvement Support Habitat Protection low-moderate moderate moderate low-mod PEM1E n/a moderate low moderate low-moderate low low PEM11 n/a low-moderate moderate moderate moderate moderate PEME1F n/a low-moderate low-moderate low moderate PEME1H n/a high low-moderate moderate moderate moderate moderate PSS1E n/a low-moderate moderate moderate PSS1F moderate low-moderate n/a low-moderate mod-high low-moderate moderate PF01E n/a moderate low-moderate юw POWH high low low-mod n/a low-moderate moderate moderate moderate moderate Overall n/a

### **Wetland Functional Values**

Numerous factors prevent these wetland habitats, individually or cumulatively, from having maximum values. Shoreline protection is given low values because the St. Maries riverine system was not included in the study areas, and none of the wetlands in the study areas extend to, or outward from, the river shoreline. Hydrologic support would require an open tidal system and/or permanent inundation for maximum value. Storm and flood water abatement would require greater woody plant density, greater dead storage, and/or an urban setting for maximum value. Groundwater exchange would require a permeable substrate and permanent, deep inundation for maximum value. Water quality improvement would require greater retention of overland flow and/or proximity to point discharge for maximum value. Biologic support would require complex special habitat features, unique species, intertidal hydrology, and/or adjacency to a significant fishery for maximum value.

The overall rating is that of a moderately valuable wetland. This rating is relative to the 'perfect' wetland that would have maximum values. The interpretation is somewhat misleading since the 'perfect' wetland does not exist on any given landscape. The St. Maries River wetlands, within the study areas, are constrained from having maximum values since they are not tidal, are not near point discharge, are not urban, and have an impermeable substrate. Within these constraints, this wetland complex has significant value by providing essential hydrologic support to the base flow of the St. Maries River, by providing flood storage and abatement for downstream homes and small towns, by providing sediment trapping functions for upstream resource extraction activities on both public and private lands, and by providing a complex mosaic of terrestrial and aquatic niches for flora and fauna throughout the food triangle.

Within the context of a moderately valued wetland, specific areas within the wetland complex may be considered as generally low value and others as generally high value. The low value areas are the farmed wetlands where

there is relatively short-term hydrology and a broad expanse of emergent vegetation lacking shrubs or trees. Edge effect is not present and the dominant plant species are seeded pasture grasses. The high value areas would be those areas where shallow and deep emergent, and shrub and tree species inter-finger, providing a maximum edge effect and diversity of habitats in a small space. The same high value may be assigned where the spectrum of hydrologic conditions from seasonally shallow to permanently deep inundation can be found in close proximity. These relatively high value areas are in the active floodplain and are highlighted in Figures 6 and 6A.

The functional value rating system provides a means of assessing wetland reclamation limitations and possibilities. Reclamation is required as a condition of the proposed mining activity. In the process of reclamation, opportunities exist to enhance, or maximize, wetland functions. Limitations to enhancement include;

- shoreline protection since the river and shoreline are not in the study areas,
- · hydrologic support since the system is non-tidal,
- storm and flood water abatement since the system is not urban,
- groundwater exchange since the area has an impermeable layer of Clarkia clay.
- water quality improvement since the system is not downstream of point discharge,
- water quality improvement since the system is not an estuary or perennial stream,
- · biologic support since the system is not intertidal, and
- biologic support since the system is not adjacent to a significant fishery.

In spite of these limitations, numerous functions may be enhanced by increasing different wetland components during reclamation design and implementation. These include;

- · hydrologic support by increasing the permanently saturated/inundated component,
- · storm and flood water abatement by increasing the percent and density of woody vegetation,
- storm and flood water abatement by increasing the dead storage capacity,
- · groundwater exchange to a limited degree by increasing the permanently flooded component,
- water quality improvement by increasing the overall vegetation density,
- · water quality improvement by increasing the retention of overland flow, and
- biologic support by adding special habitat features.

Including any or all of the above in reclamation designs would increase the value of the reclaimed wetland system beyond the existing conditions. Other, cultural practices, may also be considered as a means of increasing the value of this wetland system. The study areas are grazed throughout the summer months annually. Utilization of fencing, riparian corridor easements, or other exclusionary practices, would reduce or eliminate grazing. This would allow the natural system to reach 'full expression' on an annual basis, and on a successional basis. This may provide the opportunity for use by, or establishment of unique and/or water dependent species over time.

### APPENDIX A: CITATIONS

Adamus, P.R., 1983. A method for wetland functional assessment. Volumes I and II. Federal Highway Administration.

Cowardin, L. M., et. al., 1979. Classification of Wetlands and Deepwater Habitats of the United States. USDI Fish and Wildlife Service.

Department of the Army, 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. Waterways Experiment Station.

Davis, R.J., 1952. Flora of Idaho. Idaho State College. William C. Brown and Company.

Hitchcock, C. L., et. al., 1977. Vascular Plants of the Pacific Northwest. University of Washington Press.

Reeves, T., 1999. Personal communication re: unpublished St. Maries River basin modeling.

Reppert, R.T., et. al., 1979. Wetland values: Concepts and Methods for Wetland Evaluation, Report 79-R-1. US Army Corps of Engineers.

USDA Natural Resources Conservation Service, 1995. Hydric Soils of the United States. National Technical Committee for Hydric Soils.

USDI Fish and Wildlife Service, 1979. Classification of Wetlands and Deep Water Habitats of the United States.

USDI Fish and Wildlife Service, 1987. National Wetland Inventory, Fernwood SE Quadrangle.

### APPENDIX B: DELINEATION METHODOLOGY

Wetland investigations on the subject property were undertaken utilizing the Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1). Hydric Soils of the United States (NTCHS, NRCS, 1995) acts as a supplement to the COE manual, and is used for determining hydric soils. Analysis of wetlands on-site involves collecting preliminary data and conducting a site-specific investigation. Preliminary investigation includes a site reconnaissance as well as a background literature review. Site-specific data is collected on-site, analyzed, and reported.

### **Preliminary Data Review**

The following published literature was reviewed to identify potential wetland areas after a reconnaissance site review was completed;

- Unpublished Soil Survey of Benewah County, USDA Natural resource Conservation Service (NRCS),
- National Wetland Inventory, Fernwood SE Quadrangle 1:24000, USDI Fish and Wildlife Service. 1987;
- Color aerial photographs 1:15840, Emerald Creek Garnet, LTD., April 1995.

Soil survey and National Wetland Inventory information are presented as Figures 3 and 4, respectively, in this report. This information was reviewed to identify potential wetland areas prior to extensive site investigations. Aerial photos were also reviewed to assess potential wetland areas. Pre-typing of wetlands was not done on the photos. Photo characteristics including topographic position, drainage patterns, darker or black soils suggestive of saturation, cropping mechanisms, and vegetation typing were all considered in photo interpretation. Aerial photos were available for review during site-specific investigations. Aerial photos appear as a base for the wetland defineation figures.

### Site-specific Investigation

A field investigation for the presence and extent of jurisdictional wetlands was conducted in 1997 and 1998. The study areas were assessed throughout the 1998 growing season in May and June, July, and August. Additionally, shallow groundwater monitoring sites were established and groundwater was monitored from November 1998 through May 1999. Fifty five 11.8-foot radius (0.01 acre) data plots were established throughout the study areas to determine the presence and extent of hydrophytic vegetation, hydric soils, and wetland hydrology. Plant species on the site were identified (Hitchcock and Cronquist, 1973) and soils logs were advanced. At each plot, direct observation of each criterion was recorded to evaluate the presence of each criterion. Plant species were verified through floral characteristics during the June site visit. Criteria are evaluated by describing observations of existing conditions to determine whether or not the definition of each criterion is satisfied.

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. Emphasis is placed on the assemblage of plant species that exert a controlling influence on the character of the plant community, rather than on indicator species. The test of this definition is met when data plots indicate that the plant community is dominated by hydrophytes. Vegetation at each plot is considered hydrophytic (adapted to anaerobic conditions) when over 50% of the dominant plant species had an indicator status of facultative (FAC), facultative wetland (FACW), or obligate wetland (OBL) (Reed, 1988, revised 1994). Plant species present in each plot are listed and their percent cover within the 0.01-acre plot determined by ocular observation. Cover percentage is assigned to cover classes, and the species ranked according to the midpoints of their respective cover classes. The midpoints of ranked species are cumulatively summed until 50 percent of the total for all species' midpoints is immediately exceeded. All species

contributing to that cumulative total plus any species having 20 percent of the total midpoint value are considered dominants. Plant indicator status is then assigned each dominant to determine the percent of hydrophytes.

Hydric soil is defined as soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. In accordance with the methodology, soil samples were then taken at all data plots as well as other points on the site. The test of this definition is met at this portion of the growing season when direct observation of inundation or surface saturation was made. Duration of flooding, ponding, or saturation is also important. Hydric soils must be flooded or ponded for long (7 to 30 days) or very long (more than 30 days) duration during the growing season. Hydric soils must be saturated in the upper part for a significant period (usually more than two weeks) during the growing season. The duration requirement was satisfied because inundation or saturation observed at this time was assumed to have been present continuously since the beginning of the growing season. The National Technical Committee on Hydric Soils (NTCHS) established the following criteria in 1995 for hydric soils.

- 1) All Histosols except Folists, or
- 2) Soils in Aquic suborder, Aquic subgroups, Albolls suborder, Salorthids great group, Pell great groups of Vertisols, Pachic subgroups, or Cumulic subgroups that are:
  - a) Somewhat poorly drained and have a frequently occurring water table at the surface for a significant period (usually more than 2 weeks) during the growing season, or
  - b) Poorly drained or very poorly drained and have either:
    - frequently occurring water table at the surface for a significant period (usually more than 2 weeks) during the growing season if textures are coarse sands, sands, or fine sand in all layers within 20 inches, or for other soils.
    - 2) frequently occurring water table within 0.5 feet of the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is equal to or greater than 6.0 inches/hour in all layers within 20 inches, or
    - frequently occurring water table within 1.0 feet of the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is less than 6.0 inches/hour in a layer within 20 inches, or
- Soils that are frequently pended for long or very long duration during the growing season, or
- Soils that are frequently flooded for long or very long duration during the growing season.

At all data plots, unlined bore holes were advanced to approximately 20 inches. Bore holes were examined for subsurface soil characteristics and for water tables at or near the soil surface. Based on the NTCHS criteria, saturation to the surface was determined when a water table in an unlined bore hole was at the depths specified above.

Wetland hydrology is defined as all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those areas where the presence of water has an overriding influence on characteristics of vegetation and soils because of anaerobic and reducing conditions, respectively. The test of this definition is met when data plots show direct observation of wetland hydrology, or a sufficient number of apparent indicators, including indirect evidence of flooding, ponding, or saturation in the upper 12 inches, water marks, drainage patterns, root rhizospheres, water-stained leaves, and sediment deposits. Duration of hydrologic conditions creating anaerobic and reducing conditions must also be satisfied. Wetland hydrology must be present for 5 percent of the growing season in terms of consecutive days, or 12.5 percent of the growing season in terms of cumulative days.

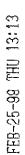
Jurisdictional wetlands were determined where vegetation, soils, and hydrology all reflect hydric conditions as defined above. The boundaries of the wetlands were delineated on 1 inch = 150 feet, scanned images of the color aerial photos supplied by ECG.

### APPENDIX C: GROUNDWATER WELL DATA

inormorning views

M.W. # 98-1 - 800 Lest Fram OHa

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From To	Depth To Water	Ground Surface	Anna and a consequence and a
12/2/98	intermittent vains 408 F	2.28 ft.	6.21ft	Below Ground Surface	Elevation G95.9	Elevation  91.97
12/10/98	overcast 30°s	2.28.ft.	5.60ft.	3.32.ft.	995.9'	992,58'
12/11/48	Clear High 20°5	2.28ft	5.53 ft.	3.25.ft	995.9'	992.65'
12/28/48	Steet of Churtok winds 40°5	2.28.ft	5.83ft	3.55∫t.	995.91	992.35'
1/07/99	light sprinkles W/sleet High 30°s	2.28ft.	5.13ft	3.55ft.	995.9	992.35
1/13/69	mild, clear 40°S	2.2.8ft.	5.10ft.	2.82ft.	995.9'	993.08'
1/22/99	sheet 30's	2.28	식.41'	1.13'	995.9	994.77'
1/24/49	mild-clear 40'S	2.28	5.06	Z.78'	998.9	993.12'
		2.28'			995.9	10 10 10 10 10 10 10 10 10 10 10 10 10



M.W. #\_\_\_\_\_\_\_

DATE	Weather Conditions	Casing Stick Up	Measured Depth ★ To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water Elevation
3/5	Dunny &	2.23	5.15	2.87'	495.9'	993.03
alia	OUBRCAST &	5.28.	4.97	2.69'	195.9'	99321
2/22/99 CSG	overcast 30°S	2.28	4.82'	८.54'	995,9	993.36
426/44	*	2.28'			995,9	
3/05/99	a" fresh swrw	2.28'	4.44	2.16'	995.9'	993.741
3/12/49	overeast 30'5	2.28	4.51	2.23'	995.9	793.67
3/19/69	(bean 40°S	2.28	4,58'	2.30'	995.9	993.60'
3/20/119	3016/2 Closen	2.23	4.70	2,42	995,9	993.48'
Merlan	Chean SO 6	2.28	4.57	2.29'	995.9	993.61

\* sent immedicability to Mike Carrall
Eforgot to verold

M.W. # 98-1

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water Elevation
4/89/99 c50	Sunny 505	2.28'	4.43'	2.15*	995.9	993.75
4/17/99	Clear 50's	2.28'	5,28	3.00'	995.91	992.9
04/23/94	Chenn So S	2.28	5.58	3.30'	995.9	997.6°
4/30/99	Cight Poin	278	5.77	3,49'	995.9	992.41
5/8/09	OULYCACI COOLO SO's	5.58	5.71	3.43'	9959	992.47
						: :

M.W. # 98-2.

# FEB-25-99 THU 13:14

# **Monitoring Well Data**

CIN C-1

470 ft from Ottal

			Measured Depth	Depth To Water	Ground Surface	Ground Water
DATE	Weather Conditions	Casing Stick Up	To Water From Toe	Below Ground Surface	Elevation	Elevation
12/2/48	indermillent rains 40.5 F	Z.02ft.	5.81.Jt	3.79 ft.	994.6	940'81.
	overcast-					
12/10/48	30.0	2.02ft	5.39 ft.	3.37 ft.	994.6	991.73
(उद	01.00					
12/17/48	214000 High 20°5	2.02ft.	5.26 ft.	1 3.24ft	994.6	991.36
CTV	j					
12/28/98	Steet w/ Chinook winds 40°5	2.02.ft.	4.4814	2.96ft	994.6	691.64
CF C	light sprinkles Wisket					
1/04/99	thigh 30°5	2.02ft.	4.73ft.	Z.71ft.	994.6'	991.891
CTC	mild, clear					1
1/13/99	40°5	2.07ft	4.54.ft.		994.6	992.08'
المالي	intermillent				·	
1/22/44	intermillent Sheet 30°S	2.02'	3.79'	1.77	994.6	992.83'
1 .	mild-clear					<b>A A A A</b>
1/28/99 CSG	c10°5	2.02'	4.32'	2.30	994.6	992.3'
		2.02			994.6	! 

M.W. # 98-2

			Measured Depth	Depth To Water	Ground Surface	Ground Water
DATE	Weather Conditions	Casing Stick Up	To Water From Toe	Below Ground Surface	Elevation	Elevation
4/09/99 CSC	Smny 50.5	2.62	3,62'	1.60	994.6	993.00
4/17/99	Clean 50°S	2.02'	티, 5%	2.56	974.6	992.04
e1/23/49	120. S	2.82'	4.80'	2.78'	991.6	991.82'
4/30/94	overcast Light Pain 50's	5.07	5.00	2.98'	994.6	991.62
ક\શ <b>ા</b> લ	ODERCIVEI SO'S	2.02	ુ, <sub>0</sub> તા	3.02'	994.6	991.58
				}		

M.W. #\_\_ 98-9

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water Elevation
2/5	Sunny 3	3,12'	491	1,79	497.6	990.81
alia	OUERCASI 4	3.12'	4.80'	1.68'	997.6	990.99
2/22/11 CSC	overeast 30'5	3.12'	4.92'	1.80	992.4	990.80'
2/24	*	3.12'			997.6	
3/05/99	onercast 1" frish snow	3.12'	3.46'	.34,	997.6	997.261
3/12/99	onercast 70'S	3.12'	3.73'	.61	992.6	991.99'
3/19/99	Clear 40°5	3.12.	3.80'	.68'	9926	991.92'
3/26/94	30.2-10.2	3,12'	3.24'	.12'	992.6	492.48
ष्रवाद्य	61-6.00 4015	3.12'	3.53	.41	997.6	997.19'

\* sent to M. Corrall w/o

M.W. # 78-3

			Measured Depth	Depth To Water	Ground Surface	Ground Water
DATE	Weather Conditions	Casing Stick Up	To Water From Toe	Below Ground Surface	Elevation	Elevation
4/09/99 CSE	Sunny 50°S	3.12'	3.46	,34	992.6	992.26
4/17/99	Clear 50°s	3.12	4.460'	1, 34'	907.6	99126
orifes [49	Charr So:S	3.12'	41.25	1,13'	947.61	991.41
1120199	CO'S	3'19,	4,43	1,31	997.6	991.29'
SKIG (1	ODENOVA CHARACO CHORACOS	3.19	<b>4.67</b> ՝	1.45	998.6	991.15
·····		ļ				

151 from OHW

M.W. # 98-4

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water
12/2/98	intermittent rains 40.5 F	2.65 ft.	6.26 ft.	3.61 ft.	492.7	199.00
12/10/98	overeast 30.5	2.65ft.	5.61 st.	2.90 ft.	992.7'	989.74
12/11/48	Clear High 20°s	2.65.ft	5.47ft.	2.82.ft	992.7"	989.88
12/28/98 CST	steet w/ chinoak	2.65ft.	4.29ft.	1.64ft.	992,7'	991.06
1/02/99	light sprinkles w/ 6/eet High 30°S	2.45ft	5.23A	2.5 eft	992.7'	990.12
1/12/49 CJU	miló, clear 40°5	2.65st	4.94 ft	2.29ft,	992.7'	990,41
1/22/99	intermedient Sheet 30°5	2.45'	4.45ft	1.80	992.7'	990.40
122/44	mild-clear 40°5	2.65	5.13	2.48'	992.7'	990.22'
		2.65			992.7	

J. US

FEB-25-99 THU 13:15

M.W. # 98 4

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water Elevation
2/5	Sunny 3 50°	2.65	5.35	2.70'	992.7'	990.0
3/13	OUERCAST 40'S	2.65	5.30	2,55'	997.7	995.15
य/22/99 esse	orwast 30.5	2.65'	5.33'	5.48.	992.7	990.02
		2.65'			997.7'	
		2.65			992.7	**
		2.65			992.7	····· ····· ·· · · · · · · · ·
		2.65			992.7'	
		2.65'	· · · · · · · · · · · · · · · · · · ·		892.7	
		2.45			992.7	

#### **Monitoring Well Data**

M.W. # 98-4

DATE	Weather Conditions	Casing Stick Up	Measured Depth To Water From Toe	Depth To Water Below Ground Surface	Ground Surface Elevation	Ground Water Elevation
2/5	Sunny j	2.65'	5.35	a.70'	992.7'	990.0
2/12	OUERCAST 40'S	2.65	5.30	2.55	997.7'	995.15
2/22/99 CSG	overcast 30.5	2.65	5.33'	2.48	992.7'	990.02
2/26/94 CSC	<b>*</b>	2.65'			992.7'	
3/05/49	overcast I" of fresh snow	2,65	4,00'	1.35' 	982.7'	991.35'
3/12/49	overast 30'S	2.65	4.07'	1.42'	992.7	991.281
3/19/99	cleur 40"5	2.65	4.12.	1.47	992.7'	991.23'
7/26/94	30'5-40'5	2.65'	nver flooding	A the C. Housing	992.7	Liveliery
4/02/94	60°5	2.45	4.96'	2.31'	992.7	990.391

sent to M. Convall accidently wood regarding

#### Monitoring Well Data

M.W. # 98-4

		T 1	Measured Depth	Depth To Water	Ground Surface	Ground Water
DATE	Weather Conditions	Casing Stick Up	To Water From Toe	Below Ground Surface	Elevation	Elevation
4/09/99	Janny 5.0.5	2.65	4.87'	2.22'	992.7	990.418
4117199	Clear 50°5	Z. 65°	4,35'	1,70'	992.7	991.00'
<u>અમુશ્</u> યોહલ	Chemic So'S	2.45	349	6,79'	992.71	991,91'
4/30/99	Ourrast Ughd Foir 50's	2.106	4,05	1,4D'	997.7	991.30
5/8/99	Outrovs Outrovs	2.65	4.29	1.64	947.7	991.06
			3		:	
			1			

#### APPENDIX D: DELINEATION FIELD DATA SHEETS

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD (DEEK SARIEST C)  Investigator: SOLVIR ENVIRONMENTAL	Date: 6-7-9 1998 County: Renewall State: 20
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Yes No No Is the area a potential Problem Area?  Yes No	Community ID: Transesct ID: Plot ID:

**VEGETATION** Cover Cover Class Indicator Areal Status Cover (%) Class Midpoint Hank Species Herbs: FACW 7 981  $\bigcirc$ Absence professis 198 Shrubs: Saplings: Trees: Percent of Dominant Species that are OBL, FACW, or FAC, excluding FAC-: \_\_\_ Remarks:

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

axonomic Cla	e (Series and Passification: $\overline{\pm i}$	hase): Cloricia						
Depth	assification: 🕂		esil+ loa		Drainage Class:			
0-B		resilly mixed	misid Aque	ordic Orthogoaff	On Hydric Soils List?	Yes No		
0-13	and the same and t	-	Soil Pro	file Description	·			
	Horizon	<b>\$</b>	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions	, Structure, etc.		
13-18+		1015 2/11.	7242415	RACE	3127 COA	<u> </u>		
			7/24/24/5		Loany So	<u>nà</u>		
	Section of the sectio	,			(			
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
lydric Soil Inc	dicators:	<u></u>						
.,								
	Histosol			Concretions				
	Histic Epipe	edon		High Organic Content in	Surface Layer in Sandy	Soils		
_	Sulfidic Od			Organic Streaking in Sar				
	Aquic Mois			Listed on Local Hydric S	-			
_	Reducing (			Listed on National Hydric	c Soils List			
		_ow-Chroma Colors		Other (Explain in Remar)				
Remarks: , )	an.	can an Pic	: DAKI 100-102	tic Features				
th.	(DE/C Com	>210 OM 4-6		7 / 27/0				
			нү	DROLOGY		_		
						<u>-</u> -		
Records	ed Data (Descri	be in Remarks):		Wetland Hydrology Indi	cators:			
	· ·	or Tidal Gage		Primary Indicators	Primary Indicators:			
	Aerial Photog			Inundate	Inundated			
/	Other (Explain	n in Remarks)		Saturate	Saturated in upper 12 inches			
No Red	corded Data Av	ailable		Water M	Water Marks			
				Drift Line	es es			
				Sedimer	nt Deposits			
Ciald Obaanie	ations:			Drainag	e Patterns in Wetlands			
-ieių Ouseiva				Secondary Indicate	Secondary Indicators (2 or more required):			
Field Observa	Surface Water	: 0-	<u></u> inches	· ·	d Root Channels in uppe			
					Water-Stained Leaves			
			,		nameu Leaves	. 12		
Depth of		Pit;	o inches	·——		12		
Depth of	Free Water in I	Pit: <u>n</u>	o inches	Local So	oil Survey Data utral Test	. 12 H3H3		
Depth of Depth to	) Free Water in I	•	3	Local So FAC-Ne	oil Survey Data	. TE INSTITUTE		
Depth of Depth to		•	inches inches	Local So FAC-Ne	oil Survey Data utral Test			
Depth of Depth to Depth to	) Free Water in I	•	3	Local So FAC-Ne	oil Survey Data utral Test			
Depth of Depth to Depth to	) Free Water in I	•	3	Local So FAC-Ne	oil Survey Data utral Test			
Depth of Depth to Depth to	) Free Water in I	•	3	Local So FAC-Ne	oil Survey Data utral Test			
Depth of Depth to Depth to	) Free Water in I	•	3	Local So FAC-Ne	oil Survey Data utral Test			
Depth of Depth to	) Free Water in I	•	inches	Local So FAC-Ne Other (E	oil Survey Data utral Test			
Depth of Depth to Depth to Remarks:	Free Water in I	^	inches wetland	Local So FAC-Ne Other (E	oil Survey Data utral Test			
Depth of Depth to Depth to Remarks:	Free Water in I	^	wetland  we No	Local So FAC-Ne Other (E	oil Survey Data utral Test Explain in Remarks)			
Depth of Depth to Depth to Remarks: Hydrophytic Vi	Saturated Soil: Separated Soil	ent?	wetland  (es) No  (es) No	Local So FAC-Ne Other (E	oil Survey Data utral Test Explain in Remarks)	(Yes) No		
Depth of Depth to Depth to Remarks: Hydrophytic Villed Hydric Soils Piled Hydrophytic Wetland Hydrophytic Villed Hydrophytic Vi	Free Water in I	ent?	wetland  we No	Local So FAC-Ne Other (E	oil Survey Data utral Test Explain in Remarks)			
Depth of Depth to Depth to Remarks: Hydrophytic Vi	Saturated Soil: Separated Soil	ent?	WETLAND  (es) No (es) No (es) No	Local Some FAC-Ne Cher (E	oil Survey Data utral Test Explain in Remarks)			
Depth of Depth to Depth to Remarks: Hydrophytic Villed Hydric Soils Piled Hydrophytic Wetland Hydrophytic Villed Hydrophytic Vi	Saturated Soil: Separated Soil	ent?	WETLAND  (es) No (es) No (es) No	Local Some FAC-Ne Cher (E	oil Survey Data utral Test Explain in Remarks)			
Depth of Depth to Depth to Remarks: Hydrophytic Villed Hydric Soils Piled Hydrophytic Wetland Hydrophytic Villed Hydrophytic Vi	Saturated Soil: Separated Soil	ent?	WETLAND  (es) No (es) No (es) No	Local Some FAC-Ne Other (E	oil Survey Data utral Test Explain in Remarks)			

Project/Site: ST MARKS RIVER  Applicant/Owner: STREAT CREEK GARAGET CO  Investigator: SELKIRK ENVIRONMENTAL		Date: 6-7-9 1998 County: Dene-sch State: TD
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?	Yes No Yes No	Community ID: Transesct ID: Plot ID: M~!9

#### **VEGETATION**

Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Aloneuros prodensis *	FACW	750	7	98/	
and the state of t					
				1/00	
990-14-16-14-16-14-16-14-16-14-16-14-16-14-16-16-16-16-16-16-16-16-16-16-16-16-16-				10	
					**************************************
			*******************************	Marie 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***************************************
Shrubs:	<del>                                     </del>				
JIII UUG.	1				
					***************************************
					<u> </u>
		***************************************	******		
Conlinge					
Saplings:		***************************************		rt mar b'r fil bergannen i ner annfage ge san ar ber banababe	
			***************************************		
<del>-</del>	<del> </del>				
Trees:					
		1	-		<del> </del>
	-	+	<del>                                     </del>	<del>-</del>	<del> </del>
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			<del>-</del>	***************************************	<u> </u>
Percent of Dominant Species that are OBL, FACW, or FAC	excluding FAC-	<u></u>	10050	i	<u> </u>
Percent of Dominant Species that are Obt., FACW, or FAC	, excluding i AC.				
Hemarks:			<del>·</del>	······································	
Deliging.					

Cover class midpoints: T<1% (none): 1=1-5% (3.0);  $2\approx6-15\%$  (10.5); 3=16-25% (20.5);  $4\approx26-50\%$  (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

SOUS

A 11. 2 5 1	(0-: :-	31 \ C \ a \		OILS CHIEF	Design of 1	\		
		Phase): <u>Clark</u> We silky mic		an 0-2%	Drainage Class; <del>_</del> _ On Hydric Soils List?	Yes (No.		
ENOTIONIC C	nasamodium. 🗀	The minimum of the		le Description	_ On ryuno oolis cist!	169 (140)		
epth	Horizon	Matrix Color	·	Mottle Abundance/Contras	t Texture, Concretion	s. Structure, etc.		
0-12		10412 2/1	7248 4/4	2ADE	SiltCoom	and had be the and the suppression of the fait of her and		
2-18 <sup>-1</sup>		1016 411	72484/5	Common	511+ Loan			
<u></u>		1271				Vic.		
		and the second second section is the section of the second				Ambania, e a zapantaria takenda ambana ana ana apangangan takenda e		
·-····				· · · · · · · · · · · · · · · · · · ·	***************************************	***************************************		
ydric Soil I	ndicators:		·					
	Histosol			Concretions				
	Histic Epip	edon		<del></del>	in Surface Layer in Sand	y Sails		
	Sulfidic Od		_	Organic Streaking in S	andy Soils	-		
	Aquic Mois	sture Regime	_	Listed on Local Hydric	Soils List			
,	LReducing (	Conditions	_	Listed on National Hyd	dric Soils List			
	Gleyed or	Low-Chroma Color	s _	Other (Explain in Rem	arks)			
lemarks: ,	Hydric B	f 40 aseas	LEDXINE 2 PH	ic features.				
		<u> </u>			<del> </del>	<del></del> -		
			HYD	ROLOGY				
Recor	ded Data (Descri	ibe in Remarks):		Wetland Hydrology I	ndicators:			
	_ Stream, Lake	, or Tidal Gage		Primary Indicato				
	_ Aerial Photog	raphs		Inund	Inundated			
/—	Other (Explain	n in Remarks)		Satura	Saturated in upper 12 inches			
No R	ecorded Data Av	⁄ailable		Water	Marks -			
				Drift L	Drift Lines			
				Sedim	ent Deposits			
ield Obser	vations:			Drain:	age Patterns in Wetlands			
				Secondary Indic	Secondary Indicators (2 or more required):			
Depth	of Surface Water	r: <u>D</u>	<u>−</u> ≲ inches	Oxidized Root Channels in upper 12 inches				
					Water-Stained Leaves			
Depth	to Free Water in	Pit:	inches	•	Local Soil Survey Data			
	. <b>.</b> . =	. (	1	}	FAC-Neutral Test			
Depth	to Saturated Soil	r. —	inches	Other	(Explain in Remarks)			
Opporter:			······································		· <del></del>			
Remarks:		•						
		<del> </del>						
			WETLAND	DETERMINATION				
lydrophytic	Vegetation Prese	ent? (	Yes No		<del></del>	<del></del>		
lydric Soils		·	Yes No	Is this Data Plot within	n a wetland?	(Yes) No		
•	Irology Present?	7	Yes No	is and bally for them		110		
lationale:		<u></u> _ <u>_</u>		· · · · · · · · · · · · · · · · · · ·	· <u> </u>	•		
attoriale.		n . ~~ N .~	ARE SAT	e Elen				
	ther C	KITEKIA	AUE SAT	اعدادن ،				
		*						

Project/Site: ST. (MARKES RIVER Applicant/Owner: EMERSON CREEK GARDET CO Investigator: SEKIRK ENVIRONMERTAL	Date: 67-6 1998  County: Beneval  State: ID
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No Yes No No Yes Yes No	Community ID: Transesct ID: Plot ID:

	VEGETATIO	NN			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Hank
Herbs:					
Aborcons prosess +	FACW	80	6	85.5	
Potentila gracilis		10	2	10.5	
Festica protessis		5		3	
Re gand		O	***************************************	29	
1					
Shrubs:					
		The state of the s			***************************************
					<u> </u>
Saplings:		THE REAL PROPERTY OF THE PROPE			***************************************
	***************************************			***************************************	
Trees:					
,			<u> </u>		
					***************************************
the state of the s					
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
Remarks:					

Cover class midpoints: T<1% (none):  $1\approx 1-5\%$  (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

				SOILS					
Map Unit Na	me (Series and I	Phase): Cok	a SI+Coer	n 0-290	Drainage Class:	YCOK_			
		me Silty Min		Sandic Endocosin 19	On Hydric Soils List?	Yes No			
				file Description					
epth (	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions	s. Structure, etc.			
0-8		1018 3/2		and and the fact of a grant of the state of the state of the same of the state of t	Sitt Loan				
8-12+		104E 6/3	_		1112	And the contract of the contra			
		10412			21.11				
		***		***************************************	American Control of the Control of t	THE STATE OF THE S			
				**************************************					
lydric Soil I	ndicators:	1		1	<u></u>				
iyana adii i	ndicators.								
	Histosol			_ Concretions					
•	Histic Epit	oedon	* J	<del></del>	n Surface Layer in Sand	v Soils			
	Sulfidic Od			Organic Streaking in Sa		,			
		sture Regime		Listed on Local Hydric S	•				
	Reducing			Listed on National Hydr					
		Low-Chroma Colo	rs	Other (Explain in Remar					
			,		•				
Remarks:	Luck B	110 0324	SIGIOS/ORS	SERVARION OF I	CAMACCOUL	NIBAB GI			
(	COD NO.	- (ID-I'M	CRITERIA	. 3		,			
	245/10G	CACA							
					<u> </u>				
			НҮ	DROLOGY					
Recor	ded Data (Descr	ribe in Remarks):		Wetland Hydrology Inc	dicators:				
	_ Stream, Lake	e, or Tidal Gage		Primary Indicators	<b>S</b> :				
<del></del>	Aerial Photog	graphs		Inundat	Inundated				
/_	Other (Explai	in in Remarks)		Saturat	Saturated in upper 12 inches				
No R	ecorded Data Av	vailable		Water i					
				Drift Lir	nes ·				
				Sedime	ent Deposits				
Field Obser	vations:			Drainag	Drainage Patterns in Wetlands				
				Secondary Indicat	Secondary Indicators (2 or more required):				
Depth	of Surface Water	r: <u> </u>	~5inches	Oxidize	Oxidized Root Channels in upper 12 inches				
				Water-	Water-Stained Leaves				
Depth	to Free Water in	Pit:	inches	Local S	Local Soil Survey Data				
					FAC-Neutral Test				
Depth	to Saturated Soi	ii:	<u>∧ ∤o</u> inches	Other (	Explain in Remarks)				
			<u> </u>						
Remarks:									
				•					
				······································	·				
		•	WIET AND	BP7FB11111171611					
			<del></del>	DETERMINATION					
	Vegetation Pres	ent?	Yes No	_					
Hydric Soils			Yes No	Is this Data Plot within	a wetland?	Yes No			
	Irology Present?	·	(Yes No						
Rationale:									
· [	tu Conto	PIA ADE	SATISFIE	Δ.					
,		- III - C							

Project/Site: ST MARIES RIVER		Date: 6-7-9 1998	
Applicant/Owner: EMSEALD CREEK GARDET C Investigator: SEKIRK ENVIRONMENTAL		County: Benevan	
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: \( \frac{\tau - 2\}{\tau} \)	

**VEGETATION** Cover Class Indicator Areal Cover Status Cover (%) Class Midpoint Rank Species Herbs: ¥ FACW 50 oming leuconthemm 3 Z 20 Shrubs: Saplings: Trees: <u>'ಯೈ</u> Percent of Dominant Species that are OBL, FACW, or FAC, excluding FAC-: \_ Remarks:

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0);  $2 \approx 6-15\%$  (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

				501	LS			
Map Unit Nar	ne (Series and i	Phase): Clorko	a Siltibo	<sup>بر</sup> ب.	0-210	Drainage Class:	Page	
Taxonomic C	lassification: $\overline{\vdash}$	ine Silvy Mix	à frieid Ag	$\infty$	« Erdonovalt	On Hydric Soils List?	Yes	No
		:	Soil Pro	file [	Description			
Depth	Horizon	Matrix Color	Mottle Color	Mott	le Abundance/Contrast	Texture, Concretion	ns. Structur	e. etc
11-0	1A	1078 3/1				Siltwa		
11-17+	Z12	DYP 4/1		1				······································
						214100	<u>~</u>	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				1			***************************************	
<del></del>				<del></del>		***************************************		
ludeia Dait la		1		.1	<del></del>			
Hydric Soil Ir	idicators.							
_	Histosol				Concretions			
	Histic Epip	pedon			High Organic Content i	n Surface Layer in Sand	ly Soils	
_	Sulfidic Oc	dor			Organic Streaking in Sa	andy Soils		
_	Aquic Moi:	sture Regime			Listed on Local Hydric	Soils List		
<u>-</u>	Reducing	Conditions			Listed on National Hyd	ric Soils List		
_	Gleyed or	Low-Chroma Colo	rs		Other (Explain in Rema	rks)		
						<del></del>		
Remarks: ¿	DASED ON	STHER :	son locs,	7	704 21 2H	HYDRIC. TH	e voy b	4/1
	UBSURFA	ace pefle	2 A etas	933	SUPFACE	"A" HORIZOX	ه د	
			нү	DRO	LOGY			
		71 · 63						
		ribe in Remarks):		}	Wetland Hydrology In-			
	_ Stream, Lake	=			Primary Indicators:			
	_ Aerial Photog				Inundated			
/		in in Remarks)			Saturated in upper 12 inches			
No He	ecorded Data Av	vallable			Water I			
					Drift Lin			
					<del></del>	ent Deposits		
Field Observ	ations:				Drainage Patterns in Wetlands			
			-		Secondary Indicators (2 or more required):			
Depth o	of Surface Water	r:	_O inches		Oxidized Root Channels in upper 12 inches			
					·	Stained Leaves		
Depth to	o Free Water in	Pit: $\underline{\gamma}$	inches inches			Soil Survey Data		
			1		FAC-Neutral Test			
Depth t	o Saturated Soil	l: <u>r</u>	inches		Other (	Explain in Remarks)		
Remarks:	<u></u>		<del></del>		· · · · · · · · · · · · · · · · · · ·			<del></del>
							· · · · · · · · · · · · · · · · · · ·	
		· 	WETLAND	DET	ERMINATION	<u></u>		
	egetation Pres	ent? (	Yes No					
Hydric Soils F			Yes (No		Is this Data Plot within	a wetland?	Yes (	No
Wetland Hydi	rology Present?		Yes No				,	
Rationale:			***************************************					
4		_	_	1				
	L c	wo crite	RIA ARE	را ـــ	ACKING.			

Project/Site: ST MADLES RIVED  Applicant/Owner: ENERALD CREEK CARDET CO  Investigator: SELVICK ENVIRONMENTAL		Date: 6-7-9 1998 County: Renewal
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

	VEGETATIO	ON			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Abparons protensis	FACIO	061	7	98/	
Agronia repens		7			
				/ 98	
					·
			, e. Militaria h h h a e e la della della <u>hanna del</u> la della	y an i lance and sing agreement the house the same and and the	
					······································
		***************************************			) indiang apadabang Milliothy sina basis to
					***************************************
				<u> </u>	
Shrubs:					
				AP - 1 4 14   120 - 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	andridopperpension for the surprise time of the
		-			
			AMA I MARA P MARA II U-BA-1444-1-1 AAAA NA	**************************************	-
Saplings:		***			
		***************************************			
			ļ		
Trees:					
		nt			
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-		्रिका		
Remarks:		<u> </u>			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Ap Unit Name (Series and Phase): Clarkia Silt coam axonomic Classification: Fire silt mixed from Approving Soil Profile I Soil	Endoagual On Hydric Soils List? Yes No				
Soil Profile I  Depth Horizon Matrix Color Mottle Color Mottle  Soil Profile I  Mottle  Soil Profile  Mottle  Soil Profile  Mottle  Soil Profile  Mottle  Soil Profile  Soil Profile  Soil Profile  Mottle  Soil Profile  Soil Profile	Description  Ide Abundance/Contrast Texture, Concretions, Structure, etc.  Silf Loan  Si				
Horizon   Matrix Color   Mottle Co	Concretions  Concretions  Concretions  Concretions  High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Local Hydric Soils List  Listed on National Hydric Soils List				
Constant	Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
S   D   4   2   1   1   2   4   3   5   2   4   3   5   5   5   5   5   5   5   5   5	Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
lydric Soil Indicators:  Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	Concretions  High Organic Content in Surface Layer in Sandy Soils  Organic Streaking in Sandy Soils  Listed on Local Hydric Soils List  Listed on National Hydric Soils List				
lydric Soil Indicators:  Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	Concretions High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Histosol Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Sulfidic Odor Aquic Moisture Regime Beducing Conditions Gleyed or Low-Chroma Colors	Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Aquic Moisture Regime ————————————————————————————————————	Listed on Local Hydric Soils List Listed on National Hydric Soils List				
Reducing Conditions / Gleyed or Low-Chroma Colors	Listed on National Hydric Soils List				
Reducing Conditions / Gleyed or Low-Chroma Colors					
Gleyed or Low-Chroma Colors	Other (Explain in Remarks)				
lemarks:					
HYDRO	LOGY				
Recorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) No Recorded Data Available	Wetland Hydrology Indicators:  Primary Indicators:  Inundated Saturated in upper 12 inches Water Marks  Drift Lines				
Field Observations:	Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):				
Depth of Surface Water: inches	Oxidized Root Channels in upper 12 inches				
Double to Espa Materia Dit	Water-Stained Leaves Local Soil Survey Data				
Depth to Free Water in Pit: inches	FAC-Neutral Test				
Depth to Saturated Soil: inches	Other (Explain in Remarks)				
Remarks:					
WETLAND DE	TERMINATION				
Hydrophytic Vegetation Present? Yes No					
Hydric Soils Present? Yes No	Is this Data Plot within a wetland?  Yes No				
Netland Hydrology Present? Yes (No)					
Rationale:					
	(1) Y-				
TWO CRITERIA ARE LACK	, em)				

Project/Site: ST MARIES FIVEE Applicant/Owner: Ensure CREEK GARRET CO Investigator: SOCKIEK ENVIRONMENTAL	Date: 67-9 (998) County: Benevich State: IS
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?   Is the area a potential Problem Area?  Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

#### **VEGETATION**

	Indicator	Areal	Cover	Cover Class	
Species	Status_	Cover (%)	Class	Midpoint	Rank
Herbs:					
Abjection pratasis x	FACW	(W)	7	98/	1
				1/98	
Shrubs:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Saplings:					
				<u></u>	
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-		<i> </i> @	70	
Remarks:			<del></del>		<del></del>
				1	

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5);  $7 \approx 96-100\%$  (98.0).

SOILS Map Unit Name (Series and Phase): Clarkia Drainage Class: \_ Taxonomic Classification: Five silky mixed freid Anxida Endocasit On Hydric Soils List? (No Soil Profile Description Matrix Color Mottle Color Mottle Abundance/Contrast Texture, Concretions, Structure, etc. Horizon Depth Silt Loans 164R 2/2 0-6 Hydric Soil Indicators: Concretions Histosol High Organic Content in Surface Layer in Sandy Soils Histic Epipedon Organic Streaking in Sandy Soils Sulfiglie Odor Listed on Local Hydric Soils List Aquic Moisture Regime Listed on National Hydric Soils List \_\_\_ Reducing Conditions \_\_ Gleyed or Low-Chroma Colors \_\_\_ Other (Explain in Remarks) HYDRIC BASED ON OBSERVATION OF INCHPORTION (NTCHS CRITERIA 3) Remarks:

_ Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
Stream, Lake, or Tidal Gage	Primary Indicators:
Aerial Photographs	Inundated
Other (Explain in Remarks)	Saturated in upper 12 inches
Vo Recorded Data Available	Water Marks
	Drift Lines
	Sediment Deposits
eld Observations:	Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth of Surface Water:	Oxidized Root Channels in upper 12 inches
	Water-Stained Leaves
Depth to Free Water in Pit: inches	Local Soil Survey Data
	FAC-Neutral Test
Depth to Saturated Soil: nches	Other (Explain in Remarks)
emarks:	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? No Is this Data Plot within a wetland? Hydric Soils Present? No Wetland Hydrology Present? Rationale:

ALL CRITERIA ARE SATISFIED.

Applicant/Owner:	ST. MARIES RIVER EMERALA CREEK GARDET CO SCIKIEK EDVIRONMENTAL		Date: 6-7-9 1998 County: Beneval State: ID
Do Normal Circums	tances exist on the site? htly disturbed (Atypical Situation)?	Yes No Yes No Yes No	Community ID:

	VEGETATIO	NC	<u> </u>		
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					·
Alopeurus probasis *	FACW	CO .	7	98/	
	\$ 19214 10814 19 19 Cod CEEF CAREGO			/98	8 4 7 8 4 20 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
					······································
				\$ - 41	***************************************
					······································
					***********************
Shrubs:					
Sirubs:					
Saplings:					
					<u> </u>
	<u> </u>	<u> </u>	ļ		
Trees:	<u> </u>				
	·		-		
	<u> </u>		-		
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-	:	10	۵)،	<u> </u>
Remarks:				<del></del>	

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Map Unit Nai	ne (Series and P	hase); <u>Cloric</u>	1.a SI(=	<u>√</u> 2004√		Drainage Class:	- Park		
axonomic C	lassification: $\overline{+_{\mathbb{N}}}$	esity mixed	t Siraid.	2900mdic	<u>- Erdzaeval</u>	On Hydric Soils L	ist? Yes Wo		
		i	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		escription		- «Албабия» битом «произвется на проукт порых и дороды проукрадыми и долго.		
)epth	Horizon	Matrix Color	Mottle Color	; ***********	e Abundance/Cor		elions, Structure, etc		
<u>0-13</u>	<b></b>	1048 2/1	7248 41		FEW	Silte	XXXX		
13-18+		10425/2	72YR 7/	5	Common	Silty Cla	e loan		
tydric Soil I	l ndicators:				<u> </u>		<del></del>		
-	Histosol			<del></del>	Concretions				
Histic Epipedon				-	ntent in Surface Layer in	Sandy Soils			
Sulfidic Odor					Organic Streaking	_			
	Aquic Mois				Listed on Local H	=			
	Reducing C				Listed on Nationa	•			
	Gleyed or L	_ow-Chroma Colo	rs		Other (Explain in I	Remarks)			
Remarks:		<del>,</del>							
			_	HYDRO	LOGY				
Recor	ded Data (Descri	he in Remarks):			Wetland Hydrolo	oav Indicators:			
	_ Stream, Lake,				Primary Indicators: Inundated Saturated in upper 12 inches				
	Aerial Photogi								
<del></del>	_ Other (Explain		•						
No Bi	ecorded Data Ava					Vater Marks			
	Journal Date 111					Prift Lines	***		
					Sediment Deposits				
Field Observ	vatione:					rainage Patterns in Wet	lands		
rielu Obser	rations.				Secondary Indicators (2 or more required):				
Denth (	of Surface Water:		- (O inche	es	Oxidized Root Channels in upper 12 inches				
Debilli	o ounace vvaler.	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		<del></del> -	Vater-Stained Leaves	TOPPOT IE HIGHES		
Denth :	to Free Water in F	oit∙ ~	inche	es	Local Soil Survey Dala				
Depuii	O LIGO YVALOLIII I	n1	1011		FAC-Neutral Test				
Depth	lo Saturated Soil:	<u></u>	inche	es	c	Other (Explain in Remark	s)		
Remarks:									
		<u>-</u>							
			WETLA	ND DET	FERMINATION	ı			
Hydrophytic	Vegetation Prese	ent?	Yes No						
•	_		Yes No	,	is this Data Plot v	within a wetland?	(Yes) No		
-			Yes No		·				
	Certelia	L 122 S	ATISFIED	٠, د					
Rationale:	rology Present?	ARE S	Yes No	, €	is this Data Plot v	within a wetland?			

Project/Site: ST MADIES PINGE Applicant/Owner: ENGRALD CREEK GARDET CO. Investigator: SECRICE ENVIRONMENTAL		Date: <u>6-7-9 1998</u> County: <u>Bonewach</u> State: <u>TO</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: 1M-25

#### **VEGETATION**

Species		Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:						
Alsosurus pratusis	*	FACW	(20)	7	98/	l
and the state of t	M ()					
					198	
14 france (1986 france 1986 france 1984 fr	44-1-10 Electrical Associations					
				•		
1000 P. (1000 P. 1000	DE-12-12-12-12-12-12-12-12-12-12-12-12-12-					
Shrubs:						
Saplings:						
Company of the Particular Control of the Control of						
Andrew Country and Alberta's replaced tops on Education () to be a supplied to the Country Cou						
Trees:						
-93May		<b>.</b>				
The state of the s						
Percent of Dominant Species that are OBL, FAC	CW, or FAC,	excluding FAC-			∞?o	
Remarks:						

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

SOLLS

/ap Unit Nan	ne (Series and	Phase): Clork	a Silt Loan		Drainage Class: Pook			
axonomic C	lassification:	Fore SIHY MIXE	d firmed Apond	ic Ello aqual <del>?</del>	On Hydric Soils List? Yes No			
				e Description	T			
epth	Horizon	Matrix Color	Mottle Color N	Nottle Abundance/Contrast				
<u>0-8</u>		1648 2/1			511-Loon			
8-16+		10/R4/1	7242 4/5	<u> </u>	Siltlean			
				***************************************				
	<u> </u>							
ydric Soil Ir	ndicators:				•			
	Histosol			Concretions				
Histic Epipedon					in Surface Layer in Sandy Soils			
Sulfidic Odor				Organic Streaking in S				
_	Aquic M	oisture Regime		Listed on Local Hydric	Soils List			
	Reducin	g Conditions	_	Listed on National Hyd	Iric Soils List			
-	Gleyed o	or Low-Chroma Colo	rs	Other (Explain in Rema	arks)			
				<u> </u>				
emarks:	-							
			нуп	ROLOGY				
Record	ded Data (Des	cr <del>i</del> be in Remarks):		Wetland Hydrology In	ndicators:			
	·	ke, or Tidal Gage		Primary Indicato				
	Aerial Phot			Inundated				
/		ain in Remarks)		Satura	ited in upper 12 inches			
No Re	ecorded Data			Water	Marks			
				Drift Li	Drift Lines			
	<del>-</del>				ent Deposits			
ield Observ	ations:			Draina	age Patterns in Wetlands			
				•	Secondary Indicators (2 or more required):			
Depth o	of Surface Wat	ter: <u></u>	<u>ro</u> inches	Oxidized Root Channels in upper 12 inches				
			1	Water-Stained Leaves				
Depth t	lo Free Water	in Pit:1	inches	l l	Local Soil Survey Data			
(-				FAC-Neutral Test				
				Other (Explain in Remarks)				
Depth (	to Saturated S	oil:	n o inches		•			
	to Saturated S	oil:	n ( ) Inches					
	to Saturated S	oil:	n ( O inches					
	to Saturated S	oil:	n (					
	to Saturated S	oil:	n (					
	to Saturated S	oil:		DETERMINATION				
emarks:			WETLAND I					
lemarks:	Vegetation Pro		WETLAND I					
emarks: ydrophytic ydric Soils I	Vegetation Pro	esent?	WETLAND I	DETERMINATION				
lemarks: lydrophytic lydric Soils I	Vegetation Pre Present?	esent?	WETLAND I	DETERMINATION				
lemarks: lydrophytic lydric Soils I Vetland Hyd lationale:	Vegetation Pro Present? Irology Presen	esent?	WETLAND I (Yes) No (Yes) No (Yes) No	DETERMINATION  Is this Data Plot within				
emarks: ydrophytic ydric Soils I /etland Hyd ationale:	Vegetation Pro Present? Irology Presen	esent?	WETLAND I	DETERMINATION  Is this Data Plot within				

Project/Site: ST MARIES RIVER  Applicant/Owner: Emerge Creek Garden Co  Investigator: Scrkick Edulard Medical		Date: 6-7-9 1998  County: Bonewak  State: ID
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

#### VEGETATION

	VEGETATIO	NN			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
	Status	COVET (76)	01033	inaponit	Henry
erbs:	FAC-	40	<b>L</b>	38	1
	U P C	35		38	
	UPC	1		20	
Poe Si	FACW	20	3	205	2
Alopecinos pratersis	1	<u> </u>			
Bar grand				965	***********************
The spans		3			
	<u></u>				*****************
Shrubs:					
Saplings:					
					_
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC	excluding FAC-	:	3	37.	
Remarks:		<u></u>	<u> </u>		
<u> </u>					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

SOILS 0-4% Drainage Class: SW Roce Map Unit Name (Series and Phase): Pora Typic Hougoot Fonc Map Unit Name (Series and Friday). 1974 1775 1776 On F
Taxonomic Classification: Coarse - loans over souly skelend wined their A On F On Hydric Soils List? (Yes) Soil Profile Description Horizon Matrix Color Mottle Color Mottle Abundance/Contrast Texture, Concretions, Structure, etc. Depth Silt-Loan  $\Delta$ 0-12 1048 5/1 12-15 104R 3/1 10YR 3/1 FEW 15-21. 21-24+ 10423/1 Hydric Soil Indicators: Histosol Concretions High Organic Content in Surface Layer in Sandy Soils Histic Epipedon \_\_\_\_ Organic Streaking in Sandy Soils Sulfidic Odor \_\_\_\_ Listed on Local Hydric Soils List Aquic Moisture Regime \_\_\_\_ Listed on National Hydric Soils List Reducing Conditions Gleyed or Low-Chroma Colors Other (Explain in Remarks) HYDRIC BASED ON REDOKINGEPHIC FEDERAGES IN 15-21 INCH STRATA. Remarks: HYDROLOGY Wetland Hydrology Indicators: Recorded Data (Describe in Remarks): Primary Indicators: Stream, Lake, or Tidal Gage \_\_\_\_ Inundated Aerial Photographs \_\_\_\_ Saturated in upper 12 inches Other (Explain in Remarks) \_\_\_\_ Water Marks No Recorded Data Available \_\_\_\_ Drift Lines Sediment Deposits Drainage Patterns in Wetlands Field Observations: Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches Depth of Surface Water: \_\_\_\_ Water-Stained Leaves \_\_\_\_ Local Soil Survey Data Depth to Free Water in Pit: \_\_\_\_ FAC-Neutral Test \_\_\_\_ Other (Explain in Remarks) Depth to Saturated Soil: Remarks: WETLAND DETERMINATION Hydrophytic Vegetation Present? is this Data Plot within a wetland? Hydric Soils Present? Yes\_ No Wetland Hydrology Present? Rationale: TWO CRITERIA ARE LACKING.

Project/Site: ST MADIES RIVED Applicant/Owner: EMEDICAL CREEK GARDET CO Investigator: SEKIRK EDULIZONMENTAL		Date: 6-7-9 1998  County: Recessit  State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: M-27

#### VEGETATION

Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:	0.0.00	00:01 (/-/			
Horaveus prateris +	FACW	රිරි	6	જ્ડડ	i
Pacso		-	uz adrewniąca a Priestrania 444 Major (a		
Phlem orderse		70	2	10.5	
Chrontheman lexastheman		5		3	
Tarascomso					
				99	
Bare grand		5	, q-4, 61-47,4 (A4) 44 614 614 614 614 614 614 614 614 614		
			····		······································
Shrubs:					
Saplings:			<u></u>		
			,		
Trees:			ļ		
			ļ.		
			·		
			<u> </u>		
			<u></u>		<u></u>
	<u> </u>		L	<u></u>	
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		्रे४०)	- <del></del>	
Remarks:			<u></u>		

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

			Tenha Mara I	SUILS				
lap Unit Na	ime (Series and F	Phase): Token	Typic Floras	vert 0-4%	Drainage Class: SW for			
axonomic (	Classification: 🖎	asabarnyave		now mixed toic 1	On Hydric Soils List?	Yes No		
_~~~		**************************************		ofile Description Cryas		**************************************		
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, S	tructure, etc.		
F-0	·	101R 2/1			Siltlam	· · · · · · · · · · · · · · · · · · ·		
7-10		101R 2/1	1724R 415	PARE	silt Coan			
10-13		104R 4/1	17242415	Common	Fine Soldy Clay	Loan		
13-18+		104R 5/3	7/248 4/4	Comma	Fire Sandy Cla	y Loan		
tydric Soil	Indicators:	<u> </u>						
	Histosol			Concretions		-		
	Histic Epip	edon		High Organic Content i	n Surface Layer in Sandy So	oils		
	Sulfidic Od			Organic Streaking in Sa				
	Aquic Mois			Listed on Local Hydric \$				
	Reducing (			Listed on National Hydi				
	Gleyed or I	Low-Chroma Colo	ors	Other (Explain in Rema	rks)			
Remarks:					<del></del>			
			н	YDROLOGY				
Paga	rded Data (Descri	ibe in Remarke):		Wetland Hydrology In	dicators:			
1 16001	-	, or Tidal Gage		Primary Indicator				
	Aerial Photog				Inundated			
-	Other (Explain			1	ed in upper 12 inches			
No F	ecorded Data Av			Water	· · · · · · · · · · · · · · · · · · ·			
	lecorded Data AV	anabic		Drift Li				
	· · · · · · · · · · · · · · · · · · ·			<del></del>	ent Deposits			
Field Obser	rvations:				ge Patterns in Wetlands			
LIGIU ODSGI	valions.			•	tors (2 or more required):			
Denth	of Surface Water		-\D_inches	_	ed Root Channels in upper 1	12 inches		
Осран	o, condec viaco,	·			Stained Leaves			
Depth	to Free Water in I	Pit: f	inches	<del></del>	Soil Survey Data	•		
Copin	io i igo i idioi iii i	<u> </u>		FAC-N				
Depth	to Saturated Soil	: <u> </u>	inches		(Explain in Remarks)			
Remarks:			· · · · · · · · · · · · · · · · · · ·			<del></del>		
			WETLAND	DETERMINATION				
•	Vegetation Prese	ent?	Yes No					
Hydric Soils			∭ No	Is this Data Plot within	a wetland?	Yes No		
Wetland Hy	drology Present?		(Yes) No					
Rationale:								
	A. Co.	760.0 0r	E SATTOF	15 N				
	MU FI	IZEIN +XL						

Project/Site: ST MARIES RIVER Applicant/Owner: EMSEALD CREEK GARDET Investigator: SELKIEK ENVIRONMENTAL	Co	Date: 6-7-9 1998  County: Benevah  State: 1D
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:  Transesct ID:  Plot ID:

**VEGETATION** 

	VEGETATIO	1	Cover	Cover Class	
Species	Indicator Status	Areal Cover (%)	Class	Midpoint	Rank
erbs:	Status	Cover (10)	01000	i iii.upo.iii	TIOTIK
Gropion report	FAC-	70	5	63	]
266 255		10	2	10.5	
Dadylis momerata		T			
hyrsanthenum levanthenum		15	2	105	
Phiem protense		T	**************************************		
Potentille gracille				784	
Bae grand		5	•		····
Shrubs:	<u> </u>				
Saplings:					
	<u> </u>				
		***************************************			
	<u> </u>				
Trees:					
			ļ	nin pagaga ngangangangangangan ngangan	
					<u> </u>
Percent of Dominant Species that are OBL, FACW, or FAC.	excluding FAC-:			570	· · · · · · · · · · · · · · · · · · ·
Remarks:	<u></u>			<del></del>	
•					
·					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOUS

las I leit Nis	ma (Daviss and	Dhanali Hal	T. 100	~ Fl	77-0 2800	Drainage Class Califfre & Sant			
		Phase): tokey -			wired Typic				
XOHOHIC C	viassincation. 🔾	The result som			ile Description	On Hydric Soils List? (Yes) (No			
epth	Horizon	Matrix Color	Motti	le Color	Mottle Abundance/C				
0-9	TIUNZUII	***************************************	IVIOUI			Silt Cam			
9-16+	<u> </u>	101221	<del> </del>			growily stitloan			
-1-10		101R 3/2	<u> </u>	-		grover - mount			
			<del> </del>		***************************************				
			·						
lydric Soil I	Indicators:		<u>.                                    </u>	1					
	Histosol				Concretions				
	Histic Epi	pedon		,	<del></del>	Content in Surface Layer in Sandy Soils			
	Sulfidic O		7	5	Organic Streaki				
	Aquic Mo		$\sim$	-	Listed on Local				
	Reducing	Conditions	1		_	nal Hydric Soils List			
	Gleyed or	Low-Chroma Colo	rs		Other (Explain i	in Remarks)			
lemarks:									
				нуг	PROLOGY				
<u></u>		<u>,                                     </u>							
Recor	rded Data (Desc	ribe in Remarks):			Wetland Hydro	ology Indicators:			
	· · · · · · · · · · · · · · · · · · ·	e, or Tidal Gage			Primary Ir				
	Aerial Photo	_				Inundated			
/_		in in Remarks)				Saturated in upper 12 inches			
<u>√</u> № P	Recorded Data A	vailable			1 1 -	Water Marks			
	<del></del>				$-+$ $\mathcal{P}$ $$	Drift Lines			
					<i>!</i>	Sediment Deposits			
ield Obser	vations:					Drainage Patterns in Wetlands ry Indicators (2 or more required):			
Donth	of Surface Water	or.	0	inchés	Secondar	Oxidized Root Channels in upper 12 inches			
Depth	OF SUITAGE MAIL	51		11101103		Water-Stained Leaves			
Depth	to Free Water in	n Pit:	م/ت	inches		Local Soil Survey Data			
- 4P				<del>_</del>		FAC-Neutral Test			
Depth	to Saturated Sc	oil:r	40	inches		Other (Explain in Remarks)			
Remarks:	<del></del>	· · · · · · · · · · · · · · · · · · ·							
estroino.									
			-						
			W	/ETLAND	DETERMINATIO	ONNC			
	: Vegetation Pre	sent?	W Yes		DETERMINATIO	ON			
	: Vegetation Pre : Present?	sent?		/ETLAND		ON of within a wetland? Yes No			
lydrophytic			Yes	No					
lydrophytic	Present?		Yes Yes	No No					
lydrophytic lydric Soils Vetland Hy	Present? drology Present	?	Yes Yes Yes	20 20 20 20 20 20 20 20 20 20 20 20 20 2	Is this Data Plo				
ydrophytic lydric Soils Vetland Hy	Present? drology Present		Yes Yes Yes	20 20 20 20 20 20 20 20 20 20 20 20 20 2	Is this Data Plo				

Project/Site: ST MARIES RIVET  Applicant/Owner: EMERALD CREEK CARNET  Investigator: SELECTION ENVIRONMENTAL	Cò	Date: 67-9 1998 County: Renewalk State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No	Community ID:

#### **VEGETATION**

	TEGETATIO				
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:				667	
Photois andnacea +	FACU	60	<b></b>	98/	
				748	
الزور الكراكة المحالة		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,
	<u> </u>				
- The state of the					************
والمرافقة والمرا		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	a pada a ang taga canapang pangapanana pan		
					<del></del>
	<del> </del>				
Shrubs:					
و من در و در					
	<del></del>	-			······································
144 144 144 144 144 144 144 144 144 144					
Saplings:			}		
				A S A S A S A S A S A S A S A S A S A S	
	<del> </del>	<del> </del>			
					***************************************
Trees:	1				
CANADA TO THE CONTROL OF THE PROPERTY OF THE P					**************************************
	ļ				
					·
Percent of Dominant Species that are OBL, FACW, or FAC,	evoluting EAC-	<del></del>	<del></del>	10096	
Fercent of Dominant Species that are ODE, FACW, OF FAC,	excluding r AO".				···
		<del> </del>			
Remarks:					ſ
				•	

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

			Soil Prof	ile Description	
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contra	st Texture, Concretions, Structure, et
05		1045 5/1	_		Siltean
5-8		DYR 2/1	7/242 415	Common	SiltLoan
8-13		10/2311	7/2412415	Common	Fire Sondy Clay Coarn
13-18+		164R 4/1	724R 4/4	Fev	Clay Loan
ydric Soil	Indicators:				
	Histosol			Concretions	
	Histic Ep	ipedon		High Organic Conter	nt in Surface Layer in Sandy Soils
	Sulfidic C	Odor		Organic Streaking in	Sandy Soils
	Aquic Mo	oisture Regime		Listed on Local Hydr	ic Soils List
	Reducing	g Conditions		Listed on National H	ydric Soils List
	Gleyed o	or Low-Chroma Cole	ors	Other (Explain in Rer	marks)
Remarks:					
				·.	
			_HYI	DROLOGY	
Poss	rdod Data (Desi	oribe in Bemarks):		Wetland Hydrology	Indicators:
Reco	,	cribe in Remarks):		Wetland Hydrology	
Reco	Stream, Lak	ke, or Tidal Gage		Primary Indical	tors:
Reco	Stream, Lak Aerial Photo	ke, or Tidal Gage ographs		Primary Indicat	tors: dated
  /	Stream, Lak Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Primary Indicated Indicate	tors: dated irated in upper 12 inches
	Stream, Lak Aerial Photo	ke, or Tidal Gage ographs ain in Remarks)		Primary Indicat Inun Satu Wate	tors: dated rrated in upper 12 inches er Marks
	Stream, Lak Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Primary Indicated Indicate	tors: dated Irated in upper 12 inches er Marks Lines
No F	Stream, Lak Aerial Photo Other (Explanation Recorded Data A	ke, or Tidal Gage ographs ain in Remarks)	·	Primary Indicated Indicate	tors: dated trated in upper 12 inches er Marks Lines iment Deposits
No F	Stream, Lak Aerial Photo Other (Explanation Recorded Data A	ke, or Tidal Gage ographs ain in Remarks)		Primary Indicat Inun Satu Wate Drift Sed	tors: dated  rated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands
No F	Stream, Lak Aerial Photo Other (Explinated Data Aerial Data Aeri	ke, or Tidal Gage ographs ain in Remarks) Available	- (S inches	Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Ind	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required):
No F	Stream, Lak Aerial Photo Other (Explanation Recorded Data A	ke, or Tidal Gage ographs ain in Remarks) Available	- (8 " inches	Primary Indicated Inun Inun Satu Wate Drift Sed Drait Secondary Indicated	tors: dated  rated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands
No Field Obser	Stream, Lak Aerial Photo Other (Explanecorded Data Aerial Photo Necorded Data Aerial Photo Vations:	ke, or Tidal Gage ographs ain in Remarks) Available		Primary Indicated Inun Inun Satu Wate Drift Sed Drait Secondary Indicated Inun Satu	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves
No Field Obse	Stream, Lak Aerial Photo Other (Explinated Data Aerial Data Aeri	ke, or Tidal Gage ographs ain in Remarks) Available	inches	Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Wate Local	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): lized Root Channels in upper 12 inches
No Field Observed Depth	Stream, Lak Aerial Photo Other (Explanecorded Data Aerial Photo Necorded Data Aerial Photo Vations:	ke, or Tidal Gage ographs ain in Remarks) Available fer:		Primary Indicated Inun Saturation Secondary Indicated Inun Saturation Secondary Indicated Inun Secondary Inun Secondary Indicated Inun Secondary I	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data
No Field Observed Depth	Stream, Lake Aerial Photo Other (Explanecorded Data Aeria) (Explanecorded Data Aeria) (Explaneco	ke, or Tidal Gage ographs ain in Remarks) Available fer:	inches	Primary Indicated Inun Saturation Secondary Indicated Inun Saturation Secondary Indicated Inun Secondary Inun Secondary Indicated Inun Secondary I	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data c-Neutral Test
No Field Observed Depth Depth	Stream, Lake Aerial Photo Other (Explanecorded Data Aeria) (Explanecorded Data Aeria) (Explaneco	ke, or Tidal Gage ographs ain in Remarks) Available fer:	inches	Primary Indicated Inun Saturation Secondary Indicated Inun Saturation Secondary Indicated Inun Secondary Inun Secondary Indicated Inun Secondary I	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data c-Neutral Test
No Field Observed Depth Depth	Stream, Lake Aerial Photo Other (Explanecorded Data Aeria) (Explanecorded Data Aeria) (Explaneco	ke, or Tidal Gage ographs ain in Remarks) Available fer:	inches	Primary Indicated Inun Saturation Secondary Indicated Inun Saturation Secondary Indicated Inun Secondary Inun Secondary Indicated Inun Secondary I	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data c-Neutral Test
No Field Observed Depth Depth Depth Remarks:	Stream, Lake Aerial Photo Other (Explanecorded Data Aerial Photo Recorded Data Aerial Data Aeria Data Aeria Data Aeria Data Ae	ke, or Tidal Gage ographs ain in Remarks) Available  ser:  in Pit:  cil:	inches inches	Primary Indicated Inun Saturation Secondary Indicated Inun Saturation Secondary Indicated Incident Indicated Incident In	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data c-Neutral Test
No Field Observer Depth Depth Depth Remarks:	Stream, Lake Aerial Photo Other (Explaneorded Data Aerial Photo Recorded Data Aerial Photo Recorded Data Aerial Photo Recorded Data Aerial Recorded Data Aer	ke, or Tidal Gage ographs ain in Remarks) Available  ser:  in Pit:  cil:	inches inches  WETLAND  Yes No	Primary Indicated Inun Saturated Secondary Indicated Secondary Ind	tors: Idated Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Root Channels in upper 12 inches Irrated Root Channels
No Field Observed Depth Depth Depth Remarks:	Stream, Lake Aerial Photo Other (Explainment of Data Aerial Photo Recorded Data Aerial Photo Surface Water in the Free Water in the Saturated Science Service Present?	ke, or Tidal Gage ographs ain in Remarks) Available  er:  cin Pit:  cil:	inches  inches  WETLAND  Yes No	Primary Indicated Inun Saturation Set Inun Sed Drift Sed Drait Secondary Indicated Inun Set Inun Sed Drait Secondary Indicated Inun Sed Drait Sed Drait Secondary Indicated Inun Sed Drait Secondary Indicated Inun Sed Drait Secondary Indicated Inun Sed Drait Sed Drait Secondary Indicated Inun Secondary Inun	tors: Idated Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Root Channels in upper 12 inches Irrated Root Channels
No Field Observed Depth Depth Depth Permarks:	Stream, Lake Aerial Photo Other (Explaneorded Data Aerial Photo Recorded Data Aerial Photo Recorded Data Aerial Photo Recorded Data Aerial Recorded Data Aer	ke, or Tidal Gage ographs ain in Remarks) Available  er:  cin Pit:  cil:	inches inches  WETLAND  Yes No	Primary Indicated Inun Saturated Secondary Indicated Secondary Ind	tors: Idated Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Root Channels in upper 12 inches Irrated Root Channels
No Field Observed Depth Depth Depth Remarks:	Stream, Lake Aerial Photo Other (Explainment of Data Aerial Photo Recorded Data Aerial Photo Surface Water in the Free Water in the Saturated Science Service Present?	ke, or Tidal Gage ographs ain in Remarks) Available  er:  cin Pit:  cil:	inches  inches  WETLAND  Yes No	Primary Indicated Inun Saturated Secondary Indicated Secondary Ind	tors: Idated Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Root Channels in upper 12 inches Irrated Root Channels

Project/Site: ST MARIES RIVER  Applicant/Owner: EINTERNO CREEK GARNET CO  Investigator: SELKIRK ENTROY MENTAL		Date: 6-7-9 (998 County: Royalach State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

VEGETATION

	VEGETATIO			· · · · · · · · · · · · · · · · · · ·	
	Indicator	Areal	Cover	Cover Class	İ
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					
	FAC+	85	.6	853	)
Fetra phra				<u> </u>	
Tongus tenurs Agrostis standers					
Agrostis standere		(5)	2	105	
				96	·····
1 Mark 1886 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			******************************	19	Andreas
A CONTRACTOR OF THE STATE OF TH					
Shrubs:					
Sinubs.					
				<u> </u>	
		<u> </u>			
Saplings:				-	
Trees:					
11000.					
	<del> </del>				<del> </del>
ADADAM SALAM					
			ļ		
	<u> </u>	<u> </u>			
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>1</u>
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC:		(0	<b>్గ</b>	···
·					
Remarks:		· · · · · · · · · · · · · · · · · · ·			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0);  $2 \approx 6-15\%$  (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

					On Hydric Soils List?	Yes)(	No_
		1		file Description			
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions	, Structure,	elc.
0-10	<u> </u>	104R 2/1			Siltean		
10 - 17		18712312			grouply Silt	-Loom	
/dric Soil I	ndicators:						
TOTIC CONT							
	Histosol		,	Concretions			
	Histic Ep		$\sim$	High Organic Content in	•	Solls	
	Sulfidic		$\varphi$	Organic Streaking in San			
		oisture Regime	<i>(</i>	Listed on Local Hydric So Listed on National Hydric			
	Reducin			Other (Explain in Remark			
	Gleyed t	or Low-Chroma Color:	8	Other (Explain in hemaix	(5)		
emarks:							
			НҮ	DROLOGY			
_ 	_ Stream, La _ Aeria! Phot	lain in Remarks)		Water M	ed d in upper 12 inches arks		
	·			Drift Line	es nt Deposits		
eld Obser	vations:			Drainag	e Patterns in Wetlands		
			_	· ·	ors (2 or more required)		
Depth	of Surface Wa	ter:	inches		d Root Channels in upp Itained Leaves	er 12 inches	
Depth	to Free Water	in Pit: <u> </u>	inches	Local Sc	oil Survey Data		
Depth	to Saturated S	oil: <u> </u>	inches		utral Test Explain in Remarks)		
emarks:		····	<u></u>				
emaiks.							
	<u>-</u> -						
	——————————————————————————————————————						
	<u> </u>		WETLAND	DETERMINATION			
	Vegetation Pre	esent?	Yes No			سر	
ydric Soils			Yes (No)	Is this Data Plot within a	wetland?	Yes (1	No
	Irology Presen	t?	Yes (No)		<u></u>	***	
etland Hyd	rology i reson						
-	nolog) i reson						

Project/Site: ST MARIES PLUEIR  Applicant/Owner: Emerald Creek Genet Co Investigator: SELKIEK ENVIRONMENTAL		Date: 6-7-9 1998 County: Renewal State: ID
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:  Transesct ID:  Plot ID:

#### **VEGETATION**

Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Photois aundmacea *	FACW	60	7	98/	(
THE RESERVE THE PROPERTY OF TH					
				198	
ACT-287 ( 1 COM FA 1200 F 1200					
Shrubs:					
Saplings:					
The second section of the second section of the second section					
Trees:					
10 may 1 may 2					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100	70	
Remarks:		<del></del>			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

				wind their V	On Hydric Soils List	? (Yes) (No	
		· · · · · · · · · · · · · · · · · · ·		file Description Cras	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concreti	ons, Structure, etc.	
<u>0-13</u>		1018 2/2	7/272415	Common	- series !	<u> </u>	
13-18+		10/18 3//	724R4/6	Common	1 Sonor O	and rain	
······································							
ydric Sail Ir	dicators:	<u>i</u>		1			
_	Histosol			Concretions			
_	Histic Ep	ipedon		High Organic Content i	n Surface Layer in Sa	ndy Soils	
-	Sulfidic (			Organic Streaking in Sa			
-		oisture Regime		Listed on Local Hydric			
-		g Conditions		Listed on National Hyd			
_	Gleyed C	or Low-Chroma Colo	ors	Other (Explain in Rema	rksj		
emarks:		·				· · · · · · · · · · · · · · · · · · ·	
<del></del>		<del></del>				·	
			нү	DROLOGY			
Record	led Data (Des	cribe in Remarks):		Wetland Hydrology In	dicators:		
	_	ke, or Tidal Gage		Primary Indicator			
	_ Aerial Photo			Inunda			
/-		ain in Remarks)			ed in upper 12 inches	5	
<u>∨</u> No Re	ecorded Data	Available		Water			
<del></del>				Drift Lin			
ald Observe	. معالم			,	ent Deposits ge Patterns in Wetlan	da	
eld Observ	ations:			1	ge Patterns in vvettari tors (2 or more requi		
Depth o	of Surface Wat	ter: <u>D</u>	-18 inches	Oxidize	ed Root Channels in t	•	
Depth t	o Free Water i	n Pit:	inches		Stained Leaves Soil Survey Data		
Donth I	o Saturated S	oil· Y	\ \alpha inches	<del></del>	FAC-Neutral Test Other (Explain in Remarks)		
Depuit	o Salulaleo Si	OII	Micres Micres	Other	Explain in Herialika)		
lemarks:		<del>.</del>			_		
						· /u.	
			WETLAND	DETERMINATION			
ydrophytic '	Vegetation Pre	esent?	(Yes) No				
lydric Soils I			Yes No	Is this Data Plot within	a wetland?	Yes No	
	rology Process	t?	(Yes No				
Vetland Hyd	rology riesen						
Vetland Hyd lationale:			tec SAM				

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERGE CREEK GARNET CO  Investigator: SCIKIRK ENVIRONMENTAL		Date: 6-7-9 1998  County: Boneval  State: 10
Is the site significantly disturbed (Atypical Situation)?	es No es No	Community ID: Transesct ID: Plot ID:

**VEGETATION** 

Class int Rank
5
5 2
5 2
3
<u></u>

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOUS

avonomio (	me (Series and	Phase): Tokey	- Hore Flow	aquents 0410 ed mines Typic A	
INDITION C	viassilication. (	ace town o		file Description Cryoquo	On Hydric Soils List? (Yes) No
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
5-10	***************************************	104R 2/1			Siltlean
0-18+		16VR3/2	_		- 2 / / 2 / 2 / / 2 / 2 / / 2 /
tallan sessan el servici e e e e e e e	***************************************				
rdric Soil I	ndicators:				
				<u>.</u> .	
	Histosol		1	Concretions	Contact to the Contact College
	Histic Ep	olpedon		High Organic Content in Organic Streaking in Sa	n Surface Layer in Sandy Soils
	Sulfidic (	oisture Regime		Listed on Local Hydric S	•
	Reducin		(	Listed on National Hydri	
		or Low-Chroma Colo	ors	Other (Explain in Remar	
				·	
emarks:					
				DROLOGY	
			<u> </u>	DHOLOGI	
Becou	rded Data (Des	cribe in Remarks):		Wetland Hydrology Inc	dicators:
	•	ke, or Tidal Gage		Primary Indicators	
	Aerial Phot			Inundal	
		ain in Remarks)			ed in upper 12 inches
✓ No F	Recorded Data			Water i	<b>M</b> arks
<u> </u>			·	/ Drift Lir	nes
					ent Deposits
eld Obser	vations:			I : —	ge Patterns in Wetlands
			<u>~</u>		tors (2 or more required):
Depth	of Surface Wa	ler:	inches		ed Root Channels in upper 12 inches
D15	10 F Wolor	in D#·	n / n inches		Stained Leaves Soil Survey Data
Depth	to Free Water	III TIL,	11(5) Inches		eutral Test
Denth	to Saturated S	oil:	n lnches		Explain in Remarks)
Dopari	10 001010100	<u></u>	110		,
emarks:					
					<del></del>
<u></u>				•	
			WETLAND	DETERMINATION_	
ydrophytic	: Vegetation Pro	esent?	WETLAND Yes No	DETERMINATION	
	_	esent?		DETERMINATION  Is this Data Plot within	a wetland? Yes No
ydric Soils	_		Yes No		a wetland? Yes No
ydric Soils	Present? drology Presen	1?	Yes No Yes No Yes No	Is this Data Plot within	a wetland? Yes No
ydric Soils letland Hyl	Present? drology Presen	1?	Yes No Yes No	Is this Data Plot within	a wetland? Yes No

Project/Site: ST MARIES RIVER Applicant/Owner: EMFRALD CREEK GARNET CO Investigator: SOURCE ENVIRON MEATER	Date: 6-7-9 1976 County: Sexessiv
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No Yes No	Community ID: Transesct ID: Plot ID:

	VEGETATIO	)NN			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Phleim orderse	FAC -	35	7	38	
Agrostis Stolonisera		20	3	20.5	
Fection rubra	FAC +	30	4	88	
Chrisantheman texandheman		10	2_	105	
Raminalus reports				***************************************	ANTALPS SAMPLE SAMPLES
Abornos pratensis X	FACW	35	4	38	
Tracos 50					
				145	
Shrubs:					
				***************************************	
Saplings:					
			,		
		.,			·
Trees:					
11001			† · · · · · · · · · · · · · · · · · · ·		
					<u> </u>
gyman (1904) ang 11964 by ang 1			, d = =================================		
	<del></del>				
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-			67%	
Remarks:		·		<del></del>	
1					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 4=26-50%95% (85.5); 7 = 96-100% (98.0).

		:	_ L.		
	1	1		~ <del>~</del>	agool(
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contras	
<u>0-2</u>		10Y2 2/7			Sittlean
<u> 2 - 8</u>		10/R3/2			Fre Sond Coarn
3-15		1018 4/2		_	Sondy Loan
***************************************					
dric Soil	Indicators:	•			
	Histosol			Concretions	
	Histic Ep	ninedon	7.		t in Surface Layer in Sandy Soils
	Sulfidic C		$\sim$	Organic Streaking in S	
		oisture Regime	$\mathcal{F}$	Listed on Local Hydric	<del>-</del>
		_	*	-	
	Reducing	_		Listed on National Hy	
	Gleyed o	or Low-Chroma Colo	HS	Other (Explain in Rem	rarks)
emarks:				· · · · · · · · · · · · · · · · · · ·	
		· <del>-</del>			<u></u>
Reco	•	cribe in Remarks):	<u>H'</u>	Wetland Hydrology I	
No I	Stream, Lak Aerial Photo Other (Explinecorded Data Aerial Data Aeri	ke, or Tidal Gage ographs ain in Remarks) Available		Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic	ors: dated rated in upper 12 inches or Marks Lines ment Deposits hage Patterns in Wetlands cators (2 or more required):
No I	Stream, Lak Aerial Photo Other (Expl Recorded Data A	ke, or Tidal Gage ographs ain in Remarks) Available	H'	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic	ors: dated rated in upper 12 inches or Marks Lines ment Deposits hage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches
No I	Stream, Lake Aerial Photo Other (Explane Recorded Data Aerial Photo Phot	ke, or Tidal Gage ographs ain in Remarks) Available	O inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic Wate	ors: dated rated in upper 12 inches or Marks Lines ment Deposits nage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves
No I	Stream, Lak Aerial Photo Other (Explinecorded Data Aerial Data Aeri	ke, or Tidal Gage ographs ain in Remarks) Available		Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic Wate	dated rated in upper 12 inches or Marks Lines ment Deposits hage Patterns in Wetlands cators (2 or more required): lized Root Channels in upper 12 inches er-Stained Leaves
No I  Peld Obse  Depti	Stream, Lake Aerial Photo Other (Explane Recorded Data Aerial Photo Phot	ke, or Tidal Gage ographs ain in Remarks) Available ier:	O inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic Wate Local	ors: dated rated in upper 12 inches or Marks Lines ment Deposits nage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves
No I  eld Obse  Depti  Depti  Depti	Stream, Lake Aerial Photo Other (Explored Data Aerial Photo Precious Precio	ke, or Tidal Gage ographs ain in Remarks) Available ier:	o inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic Wate Local	dated rated in upper 12 inches or Marks Lines ment Deposits rage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data
No I  eld Obse  Depti  Depti  Depti	Stream, Lake Aerial Photo Other (Explored Data Aerial Photo Precious Precio	ke, or Tidal Gage ographs ain in Remarks) Available ier:	o inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Sedir Drain Secondary Indic Wate Local	dated rated in upper 12 inches or Marks Lines ment Deposits rage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data
No I  eld Obse  Depti	Stream, Lake Aerial Photo Other (Explored Data Aerial Photo Precious Precio	ke, or Tidal Gage ographs ain in Remarks) Available ier:	inches inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC-Othe	dated rated in upper 12 inches or Marks Lines ment Deposits rage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data
No I No I Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explane Recorded Data Aerial Photo Presented Data Aerial Photos Surface Water in the Free Water in the Saturated Section 1 of S	ke, or Tidal Gage ographs ain in Remarks) Available  eer:  in Pit:	inches inches	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC-Othe	dated rated in upper 12 inches or Marks Lines ment Deposits rage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data
No I  eld Obse  Depti  Depti  Depti  emarks:	Stream, Lake Aerial Photo Other (Explane Recorded Data Aerial Photo Presentations:  In of Surface Water in the Saturated Section Section 1 to Saturated Section Preserved Preser	ke, or Tidal Gage ographs ain in Remarks) Available  eer:  in Pit:	inches inches wetlant	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC- Other	dated rated in upper 12 inches or Marks Lines ment Deposits mage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data Neutral Test r (Explain in Remarks)
No I  eld Obse  Depti  Depti  Depti  emarks:	Stream, Lake Aerial Photo Other (Explored Data Aerial Photo Presented Data Aerial Photo Presented Section Presented Sect	ke, or Tidal Gage ographs ain in Remarks) Available ler: in Pit: esent? (	inches inches wetlant	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC-Othe	dated rated in upper 12 inches or Marks Lines ment Deposits nage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data Neutral Test or (Explain in Remarks)
No I  No I  Peld Obse  Depth  Depth  Depth  emarks:	Stream, Lake Aerial Photo Other (Explane Recorded Data Aerial Photo Presentations:  In of Surface Water in the Saturated Section Section 1 to Saturated Section Preserved Preser	ke, or Tidal Gage ographs ain in Remarks) Available ler: in Pit: esent? (	inches inches wetlant	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC- Other	dated rated in upper 12 inches and Marks Lines ment Deposits mage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data Neutral Test r (Explain in Remarks)
No I No I No I Depti Depti Depti emarks:	Stream, Lake Aerial Photo Other (Explored Data Aerial Photo Presented Data Aerial Photo Presented Section Presented Section Presented Section Presented Section Presented Presented Section Presented Section Presented Sec	ke, or Tidal Gage ographs ain in Remarks) Available ler: in Pit: esent? (	inches inches wetlant	Wetland Hydrology I Primary Indicate Inunc Satur Wate Drift I Secondary Indic Oxidi Wate Loca FAC- Other	dated rated in upper 12 inches and Marks Lines ment Deposits mage Patterns in Wetlands cators (2 or more required): ized Root Channels in upper 12 inches er-Stained Leaves I Soil Survey Data Neutral Test r (Explain in Remarks)

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK GARNET  Investigator: SEKIRK ENVIRON MENTAL	<u>Co</u>	Date: 6-7-9 1998  County: Seneral State: TD
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: \( \frac{1}{1} \cdot -3 \frac{1}{2} \)

VEGETATION					
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
lerbs:					
Freduce cubra X	FAC+	6.9	<u>(</u>	85.5/	
Phlein praterio		Τ			· ······
Hieraceum sos			*******	85.5	<b>1</b> 00-7-4 <b>0-7-7-2-7-2-7-2-7-</b>
Bollis porrenis		T			·····
Achilles millefelium			PROBES LEVELES AND THE SUPPLIES AND THE		Transpaga Metalalises
Raegond		10			h-sar konstantiilikkiideldeltaa
Shrubs:					
				***************************************	**************************************
					***
Saplings:					
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		(03	270	
Remarks:			<u></u>		<del></del>

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-15%95% (85.5); 7 = 96-100% (98.0).

SOUS

raxonomic C	assilication: 🖸	Assignation one	· · · · · · · · · · · · · · · · · · ·		escription Cyaquell (Yes No				
Depth	Horizon	Matrix Color	Mottle Color		e Abundance/Contrast Texture, Concretions, Structure, etc.				
0-8	TOTAL								
		10/8 2/2	1		English				
8-20		1015 315		-	- the sali can				
Hydric Soil Ir	idicators:								
_	Histosol				Concretions				
	Histic Epip	pedon	$\prec$		High Organic Content in Surface Layer in Sandy Soils				
_	Sulfidic Oc	dor	$\varphi$		Organic Streaking in Sandy Soils				
_	Aquic Moi	sture Regime	/		Listed on Local Hydric Soils List				
_	Reducing	Conditions			Listed on National Hydric Soils List				
	Gleyed or	Low-Chroma Colo	rs		Other (Explain in Remarks)				
Remarks:									
			н	/DRO	LOGY				
Recorded Data (Describe in Remarks): Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks)					Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in upper 12 inches Water Marks				
	ecorded Data A				Drift Lines Sediment Deposits				
<del></del>			•						
Field Observ	rations:				Drainage Patterns in Wetlands				
Denth :	of Surface Wate	ır.	inches		Secondary Indicators (2 or more required):  Oxidized Root Channels in upper 12 inches				
Depin (	л Sunace Wate	···	IIICIRES		Water-Stained Leaves				
Denth t	o Free Water in	Pit:	inches		Local Soil Survey Data				
Dehm	U 1 100 178101 III				FAC-Neutral Test				
Depth (	o Saturated So	ii:	nches inches		Other (Explain in Remarks)				
Remarks:		, , , , , , , , , , , , , , , , , , ,	( 						
			WETLAND	DE	ERMINATION				
Hydric Soils			Yes No		Is this Data Plot within a wetland?  Yes No				
	rology Present?	<u> </u>	Yes (No)	<del></del>					
Rationale:		•	<del></del>						
	SWT	CRITERIA	LARE LI	N XX	∞.				
	· <del>-</del>		<del></del>						

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK GARDET CO  Investigator: SCIKIRK ENVIRONMENTAL		Date:6-7-9   1998   County:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:  Transesct ID:  Plot ID:  1 1 1 - 3 5

**VEGETATION** 

	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					
Feduca rubra *	FAC+	85	6	85.5	(
Chrisanthemen lexanthemen		· 15	2	10.5	
				96	
					an and desired which descends the same year.
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		***************************************
				ļ	····
	<u> </u>			<del> </del>	
Shrubs:					***************************************
					**************************************
				<del> </del>	
					·····
Saplings:	<u> </u>				
i dapiningo.				***************************************	
	***************************************		***************************************	***************************************	***************************************
Trees:					
				***************************************	
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	L
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100 %	<u> </u>	
				·	·
Remarks:					İ

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOHS

Map Unit Na	ime (Series and	Phase) Toka-	Typic Flore		Drainage Class: S	With Steer			
axonomic (	Classification:	case Janua, a	<del></del>		On Hydric Soils List	? Yes No			
	11-1	. Marin Oalan		\$	agvall				
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contr	ast Texture, Concreti	ons, Structure, etc.			
<u>D-6</u>		1015 515			the South	Loan			
5-13		164R3/3			Fine Sond	Loan			
3-16+		10123/3	7/27R415	Few	Fre Sandi	y loan			
ydric Soil I	Indicators:								
	Histosol		1	Concretions					
	Histic Epi		<b>*</b>	-	ent in Surface Layer in Sa	ndy Soils			
	Sulfidic O			Organic Streaking in	•				
	Aquic Mo	-		Listed on Local Hyd					
	Reducing			Listed on National I	•				
	Gleyed or	Low-Chroma Colo	rs	Other (Explain in Re	emarks)				
emarks: C	Throma c	of 3 with	mothles is	shop Ton a					
				· · · · · · · · · · · · · · · · · · ·					
			НҮ	DROLOGY					
Popol	rdod Data (Doss	ribe in Remarks):		Wetland Hydrology	/ Indicators:				
1 1600	-	e, or Tidal Gage		Primary Indica					
	Orlean, can			· ·	Inundated				
_		graphs in in Remarks)			Saturated in upper 12 inches				
No B	Other (Explo			1.	ter Marks	•			
<u>V</u> NO F	iecordeo Data A	valiable		1 7	t Lines				
·			···	<b>—</b> —					
					diment Deposits	1-			
eld Obser	vations:				inage Patterns in Wetlan				
			~	<u> </u>	dicators (2 or more requir	·			
Depth	of Surface Water	er:	<u> </u>		dized Root Channels in u	pper 12 inches			
				1	ter-Stained Leaves				
Depth	to Free Water in	Pit: _ <u>\bigain</u>	inches		al Soil Survey Data				
Denth	to Saturated So	il: Y	inches		C-Neutral Test ier (Explain in Remarks)				
emarks:									
				<del></del>		_			
			WETLAND	DETERMINATION	·	. <del></del>			
	Vegetation Pres	sent?	Yes No						
ydric Soils	Present?		Yes No	Is this Data Plot wit	thin a wetland?	Yes No			
etland Hy	drology Present	?	Yes (No)						
ationale:									
	n. ~~	~-~	- 100000						
'	I WO CE	ITERIA AR	e (acking	<del>&gt;-</del> .,					

Project/Site: ST MARIES RIVER		Date: (5-7-9 , 1998
	<i></i>	
Applicant/Owner: EMERALD CREEK GARDET		County: Benevel
Investigator: SEKIR ENVIRONMENTAL		State:
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transesct ID:
is the area a potential Problem Area?	Yes No	Plot 1D:
		Tr.

	VEGETATIO	) N			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Abopecons protess x	FACW	50	પ્	38	ļ
Cocex restroction		7.0	2_	70.5	
Festura rubra *	FACT	35	4	38	1
22 om				86.5	
Shrubs:					
Saplings:					
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		(	∞7₀	
Remarks:					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5);  $4\approx26-50\%$  (38.0); 5=51-75% (63.0);  $6\approx76-10\%$ 95% (85.5); 7 = 96-100% (98.0).

SOUS

axonomic (	Classification:	coaso farmino	or Southy stel						
					yaqvoll				
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contr					
<u>0-6</u>		10/2 3/2	7/242 4/5	Few	Sangi Coarn				
6-11		164R3/3	7242415	Few	Sondylan				
11-18+		164R4/3	7/24/84/5	Few	Leavy Sand				
					1				
dric Soil I	ndicators:								
,				Consisting					
	Histosol			Concretions	ent in Surface Layer in Sandy Soils				
	Histic E <sub>l</sub> Sulfidic	•		Organic Streaking in	·				
		loisture Regime		Listed on Local Hyd	-				
		ng Conditions		Listed on National I					
		or Low-Chroma Cole	ors	Other (Explain in Re					
	0.0,00	5. 25tt 5,115th 6 50t	<del></del>	a seem from the second of the	···· <del>-</del>				
			CN7CHS CE		CHEOMA BUT OBSERVED				
			НҮ	DROLOGY					
Recor	dad Data (Des	scribe in Remarks):		Wetland Hydrology	v Indicalors:				
116601		ike, or Tidal Gage		= = =	Primary Indicators:InundatedSaturated in upper 12 inches				
	Aerial Phot								
		lain in Remarks)							
No B	ecorded Data			· · · · · · · · · · · · · · · · · · ·	ter Marks				
				Drif	it Lines				
				Sec	diment Deposits				
ield Obser	vations:			Dra	Drainage Patterns in Wetlands				
				Secondary Inc	dicators (2 or more required):				
Depth	of Surface Wa	iter: <u>D</u>	inches	Oxi	idized Root Channels in upper 12 inches				
			. ,		iter-Stained Leaves				
Depth	to Free Water	in Pit:	n o inches		cal Soil Survey Data				
			l I		C-Neutral Test				
Depth	to Saturated S	Soil:	n inches	Oth	ner (Explain in Remarks)				
Remarks:			· · · · · · · · ·						
	Manadan		WETLAND	DETERMINATION					
	Vegetation Pr	esent?	Yes No	In this Data Dist	thin a watland?				
ydric Soils		-10	Yes No	Is this Data Plot wi	thin a wetland? Yes No				
/etland Hyd ationale:	drology Preser	N. /	(Yes) No						
		۸							
Du c	PITEDIA	. HEE SAF	TISFIED.	MOSTLAND	EDGE & MARGINAL				
į	DETZALO								
		<del></del>							

Project/Site: ST. MARIES RWER  Applicant/Owner: EMERALD CREEK GARDET CO  Investigator: SELVIR ENVIRONMENTED		Date: 6-7-9 1998 County: Renewal
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

VEGETATION								
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank			
Herbs:								
Alopeurus prateisis *	FACY	<i>\</i>	7	98/	(			
Pestaca rubra		7						
				/98				
			-					
	<u> </u>		······································	<u></u>				
Shrubs:								
Conlingo	<del>                                     </del>	-						
Saplings:								
Trees:								
					***************************************			
THE STATE AND THE STATE OF THE								
					<u> </u>			
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-:		100	<u> </u>	···			
Remarks:		·······						

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

		Phase): toce	ا شرا						
raxonomic	Classification:	we have				<u>On Hydric Soils Li</u> y عرص ال	st? Yes)(No)		
Depth	Horizon	Matrix Color	Mottle Col		tie Abundance/Contra	ast Texture, Concre	etions, Structure, etc.		
0-5		1017 2/Z	7242	4/4	Few	Fine Son	dy lown		
5-9		164R 2/1	7/242		Few	Fire Son	L. Loan		
9-13		WYR 3/2	7/2/2		Common	Fore Son	dy loan		
(3-17	+	104P 4/3	7/21/12	415	Common	Fix Sow	1 .		
Hydric Soil	Indicators:						<u>.                                    </u>		
	Histosol				Concretions				
	Histic Epi	nedon			<b>-</b>	ent in Surface Layer in S	Sandy Soils		
	Sulfidic O			Organic Streaking in					
		isture Regime			Listed on Local Hyd	="			
	Reducing				Listed on National H				
		Low-Chroma Colors	s	_	Other (Explain in Re	•			
Remarks:									
				HYDRO	DLOGY				
Pecorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage  Aerial Photographs Other (Explain in Remarks) No Recorded Data Available				Wetland Hydrology Indicators:  Primary Indicators:  Ipundated Saturated in upper 12 inches Water Marks Drift Lines					
Field Obser	rvations:				Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches Water-Stained Leaves Local Soil Survey Data				
Depth	of Surface Wate	er: <u>D</u>	inc _d_ inc	hes					
Depth	to Free Water in	ı Pit:	10 inc	hes					
Depth	to Saturated So	ii: <u>r</u>	inc	hes	FAC-Neutral Test Other (Explain in Remarks)				
Remarks:			<del></del>						
			<del></del>	<u> </u>		·			
	<u></u>		WETL	AND DE	TERMINATION		<u>.</u>		
	: Vegetation Pres	sent?	√es No						
Hydric Soils		í	λæ≶ νο		Is this Data Plot wit	hin a wetland?	(Yes) No		
Wetland Hy	drology Present	? (	Yes No		<u> </u>				
Rationale:	Au Cei	TERIA ARE	_ SATI	SFIED	•				

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERAD CREEK GARDES CO  Investigator: SOKIEK ENVIRONMENTAL		Date: 6-7-9 1998 County: Ronewook State: Th
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

	VEGETATIO	) N		<del></del>	
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
ferbs:					
Aloxanus pratonsis *	FACW	68	6	855	1
Festiva rubra		22	3	70.5	
				106	
			ووراشد ا دساط درو بردوي وووكشا كالمنادي		و و سال در در در در در در در در در در در در در
				********************************	
		<b></b>			
	<del></del>	<u> </u>		<del></del>	
Shrubs:					
			<u> </u>		
	<u> </u>		<u></u>		
			<del></del>	<del>                                     </del>	
Saplings:			<u> </u>		
		-	<u> </u>		·······
		<del>-</del>			
		<del> </del>			
Trees:		<u> </u>	<b></b>		
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	-	<del> </del>	<del> </del>		
			<del>                                     </del>	<del></del>	
Descent of Deminent Chapter that are ODL EACHL ATEAC	evolution EAC:		<u></u>	<u> </u>	L
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC.	·		<u> </u>	
Remarks:					
המושחה.					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 4=26-15%95% (85.5); 7 = 96-100% (98.0).

		!	MOC TO	Soil Pro	Itile Description Cyc	On Hydric Soils List? (Yes)	-
epth	Horizon	Matrix Color	Mottle		Mottle Abundance/Contra		e, etc
<u> </u>		1642 2/Z	7/241	2 4/5	Few	Sondy Loon	
7-12		164 B 2/1		R 4/5	FEW	Fre Sondy Coan	
2-17	***************************************	64B 3/2	7/24		Few	Fore Sandy lovan	
····							
drie Spil II	ndicators:			<del></del>			<del></del>
unc oun n	idicators.						
	Histosol				Concretions		
	Histic Epipe					nt in Surface Layer in Sandy Soils	
	Sulfidic Od				Organic Streaking in		
	Aquic Mois				Listed on Local Hydr		
•	Reducing C				Listed on National H		
	Gleyed or L	.ow-Chroma Colo	ors		Other (Explain in Rer	narks)	
emarks:							
		······		НҮ	DROLOGY		
Recor	ded Data (Descri	he in Remarks)·			Ne Catherine of A hardwarf a mare	Indicator	
	a <del>c</del> a nara Incoom	ov mi i içiridi.			t wenana myarawa i	morcaiors	
1100011					Wetland Hydrology Primary Indica		
	_ Stream, Lake,	or Tidal Gage			Primary Indica	tors:	
	_ Stream, Lake, _ Aerial Photogi	or Tidal Gage raphs			Primary Indica	ors: dated	
	Stream, Lake, Aerial Photogr Other (Explain	or Tidal Gage raphs i in Remarks)			Primary IndicaInunSatu	tors:	
	_ Stream, Lake, _ Aerial Photogi	or Tidal Gage raphs i in Remarks)			Primary Indicat Inun Satu Wate	tors: dated rated in upper 12 inches	
	Stream, Lake, Aerial Photogr Other (Explain	or Tidal Gage raphs i in Remarks)			Primary Indicat  Inun  Satu  Wate	iors: dated rated in upper 12 inches er Marks Lines	
No R	Stream, Lake, Aerial Photogi Other (Explain ecorded Data Ava	or Tidal Gage raphs i in Remarks)			Primary Indicated Inum Saturated Inches Saturated Inches Saturated Inches Sed	iors: dated rated in upper 12 inches er Marks Lines iment Deposits	
No R	Stream, Lake, Aerial Photogi Other (Explain ecorded Data Ava	or Tidal Gage raphs i in Remarks)			Primary Indicat Inun Satu Wate Drift Sed Drai	tors: dated trated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands	
No R	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations:	or Tidal Gage raphs in Remarks) ailable		inches	Primary Indicat  Inun Satu Wate Drift Sed Drai Secondary Ind	tors: dated trated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required):	s
No R	Stream, Lake, Aerial Photogi Other (Explain ecorded Data Ava	or Tidal Gage raphs in Remarks) ailable	s -S	_ inches	Primary Indicat Inun Satu Wate Drift Sed Drait Secondary Ind	tors: dated trated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands	s
No R	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations:	or Tidal Gage raphs n in Remarks) ailable	2-5	_ inches	Primary Indica Inun Satu Wate Drift Sed Drait Secondary Ind Oxic Wate	tors:  dated  trated in upper 12 inches  er Marks  Lines  timent Deposits  nage Patterns in Wetlands  ticators (2 or more required):  lized Root Channels in upper 12 inches	s
No R eld Observ	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations:	or Tidal Gage raphs n in Remarks) ailable	0-5. No	_	Primary Indicat  Inun Satu Wate Drift Sed Drai Secondary Ind Wate Local	tors:  dated  trated in upper 12 inches  or Marks  Lines  timent Deposits  nage Patterns in Wetlands  totators (2 or more required):  dized Root Channels in upper 12 inches  or Stained Leaves	s
No R  leld Observ  Depth	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations:	or Tidal Gage raphs in Remarks) ailable	2-5 No	_	Primary Indicat  Inun Satu Wale Drift Sed Drai Secondary Ind Wat Loca FAC	tors: dated trated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): lized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data	s
No R ield Observ Depth	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Avavations: of Surface Water in Free Water	or Tidal Gage raphs in Remarks) ailable	0-5. No	_ inches	Primary Indicat  Inun Satu Wale Drift Sed Drai Secondary Ind Wat Loca FAC	tors: dated prated in upper 12 inches ar Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ar Soil Survey Data c-Neutral Test	s
No R  ield Observ  Depth  Depth  Depth	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Avavations: of Surface Water in Free Water	or Tidal Gage raphs in Remarks) ailable	0-5 No No	_ inches	Primary Indicat  Inun Satu Wale Drift Sed Drai Secondary Ind Wat Loca FAC	tors: dated prated in upper 12 inches ar Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ar Soil Survey Data c-Neutral Test	s
No R  eld Observ  Depth  Depth  Depth	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Avavations: of Surface Water in Free Water	or Tidal Gage raphs in Remarks) ailable	0-5 No n/o	_ inches	Primary Indicat  Inun Satu Wale Drift Sed Drai Secondary Ind Wat Loca FAC	tors: dated prated in upper 12 inches ar Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ar Soil Survey Data c-Neutral Test	<b>S</b>
No R  eld Observ  Depth  Depth  Depth	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Avavations: of Surface Water in Free Water	or Tidal Gage raphs in Remarks) ailable	No No	_ inches	Primary Indicat  Inun Satu Wate Drift Sed Drai Secondary Ind Oxio Wate Loca FAC Othe	tors: dated prated in upper 12 inches ar Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ar Soil Survey Data c-Neutral Test	s
No R  eld Observ  Depth  Depth  Depth  emarks:	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations: of Surface Water to Free Water in F to Saturated Soil: Vegetation Prese	or Tidal Gage raphs In Remarks) ailable	WE	inches inches	Primary Indicated Inum Sature Water Sed Draited Secondary Indicated  dated prated in upper 12 inches prated in upper 12 inches prated in upper 12 inches prate in the ser Marks Lines prate in the ser Marks prate Patterns in Wetlands prate Patterns in Wetlands prate Patterns in Wetlands prate It inches prate		
No R  eld Observ  Depth  Depth  Depth  emarks:	Stream, Lake, Aerial Photogram, Other (Explain ecorded Data Avaitations:  of Surface Water in Fito Saturated Soil: Vegetation Present?	or Tidal Gage raphs In Remarks) ailable	WE	inches inches  ETLAND No	Primary Indicat  Inun Satu Wate Drift Sed Drai Secondary Ind Oxio Wate Loca FAC Othe	dated prated in upper 12 inches prated in upper 12 inches prated in upper 12 inches prate in the ser Marks Lines prate in the ser Marks prate Patterns in Wetlands prate Patterns in Wetlands prate Patterns in Wetlands prate It inches prate	
No R  No R  Depth  Depth  Depth  Depth  demarks:	Stream, Lake, Aerial Photogr Other (Explain ecorded Data Ava vations: of Surface Water to Free Water in F to Saturated Soil: Vegetation Prese	or Tidal Gage raphs In Remarks) ailable	WE	inches inches	Primary Indicated Inum Sature Water Sed Draited Secondary Indicated  dated prated in upper 12 inches prated in upper 12 inches prated in upper 12 inches prate in the ser Marks Lines prate in the ser Marks prate Patterns in Wetlands prate Patterns in Wetlands prate Patterns in Wetlands prate It inches prate	No	
No R  eld Observ  Depth  Depth  Depth  emarks:	Stream, Lake, Aerial Photogram, Other (Explain ecorded Data Avaitations:  of Surface Water in Fito Saturated Soil: Vegetation Present?	or Tidal Gage raphs In Remarks) ailable	WE	inches inches  ETLAND No	Primary Indicated Inum Sature Water Sed Draited Secondary Indicated  dated prated in upper 12 inches prated in upper 12 inches prated in upper 12 inches prate in the ser Marks Lines prate in the ser Marks prate Patterns in Wetlands prate Patterns in Wetlands prate Patterns in Wetlands prate It inches prate		

Project/Site: ST MARIES RIVER Applicant/Owner: Energy (REEX GARJET (S) Investigator: SELVIR SAVIRGISMED AL		Date: 6-7-9 1998  County: Bonecook  State: Th
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:  Transesct ID:  Plot ID:

# **VEGETATION** Areal Cover Cover Class Indicator Status Cover (%) Class Midpoint Rank Species Herbs: 3 **Z**... Drafons,15 Shrubs: Saplings: Trees: Percent of Dominant Species that are OBL, FACW, or FAC, excluding FAC-: \_ Remarks:

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

		d Phase): De			X III III X		SW too 9 Fact
Taxonomic C	Jassincation;	CONSCIONAL PROPERTY	one.		ofile Description		st? (Yes) (No )
Depth	Horizon	Matrix Color	Mottle	Color	Mottle Abundance/Con	Gyaquall	etions, Structure, etc.
O-7	110112011	104 E Z / Z		24/5	Few	Fine Sc	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
7-12					1		by Loan
12-18+		16423/1		12415	Common	**************************************	only loan
		M23/2	1127	P415	Commen	1-11/2	ad lean
lydric Soil I	ndicators:		1				
•					Otion-		
	Histosof				Concretions	itent in Surface Layer in S	andy Saila
	Histic E				Organic Streaking	•	andy sons
		loisture Regime	_		Listed on Local Hy		
	_ /	ng Conditions			Listed on National		
		or Low-Chroma Cok	ors		Other (Explain in F	•	
						,	
Remarks:				_			
<del></del>				ну	DROLOGY		·
Recor		scribe in Remarks): ike, or Tidal Gage			Wetland Hydrolog Primary India	cators:	
	Aerial Phol	=				undated	
/-		iain in Remarks)				aturated in upper 12 inch	es
<u> </u>	ecorded Data	Available				later Marks	
<del> </del>						rift Lines	
						ediment Deposits	
Field Obser	vations:					rainage Patterns in Wetla	
Danik	of Curlose Me	×	-7	_ inches	1	ndicators (2 or more requ exidized Root Channels in	•
Deptin	of Surface Wa	ilei.		_ 11101169		Vater-Stained Leaves	Tupper 12 mones
Denth	to Free Water	in Pit* Y	1/2	_ inches		ocal Soil Survey Data	
Debin	to rice water		<del></del>	11101100		AC-Neutral Test	
Depth	to Saturated S	Soil:	nlo	_ inches		Other (Explain in Remarks	s)
Remarks:		<del>-</del>					
			(att	CTLANE	DETERMINATION		
Transport of the	Manadalian D	esent?	6.	ETLAND	DETERMINATION		
Hydrophytic Hydric Soils	Vegetation Pr	esent f	Yes	No No	Is this Data Plot v	vithin a wetland?	(Yes) No
-	Present? drology Preser	at?	Yes	No	15 tills Data I 10t y	THE PERSONS IN THE PE	NO INC
Rationale:	urology i lesel	16.2					····
	Acc (	LITERIA	ARE	SAT	15 F18D.		

Project/Site: ST MARIES RIVER  Applicant/Owner: Emeral Creek GARDET (D  Investigator: SELKIRK ENVIRONMENTAL		Date: 6-7-9 1998  County: Benevah  State: 10
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: M-40

**VEGETATION** Indicator Areal Cover Cover Class Status Cover (%) Class Midpoint Rank Species Herbs: FAC + 75 2 3 Shrubs: Saplings: Trees: Percent of Dominant Species that are OBL, FACW, or FAC, excluding FAC-: \_\_\_\_ Remarks:

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOILS 0-4 10 Map Unit Name (Series and Phase): Pokey - Now Hovaquents Drainage Class: SWFort Taxonomic Classification: (2000 losmy over Sond skeled mixed Typic A On Hydric Soils List? (Yes) (No) Soil Profile Description Cryogodi Mottle Abundance/Contrast Matrix Color Mottle Color Texture, Concretions, Structure, etc. Depth Horizon 104R 2/2 loam 0-8 8-14 104R 3/2 14-18+ Fey) Hydric Soil Indicators: Concretions Histosol High Organic Content in Surface Layer in Sandy Soils \_\_\_ Histic Epipedon \_\_\_\_ Sulfidic Odor \_\_\_\_ Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Aquic Moisture Regime Listed on National Hydric Soils List Reducing Conditions \_\_\_ Gleyed or Low-Chroma Colors Other (Explain in Remarks) Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Recorded Data (Describe in Remarks): Primary Indicators: Stream, Lake, or Tidal Gage \_ inundated Aerial Photographs Other (Explain in Remarks) Saturated in upper 12 inches \_\_ Water Marks No Recorded Data Available \_\_ Drift Lines \_\_\_\_ Sediment Deposits Drainage Patterns in Wetlands Field Observations: Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches inches Depth of Surface Water: \_\_\_\_ Water-Stained Leaves Local Soil Survey Data Depth to Free Water in Pit: FAC-Neutral Test \_\_\_\_ Other (Explain in Remarks) Depth to Saturated Soil: Remarks: WETLAND DETERMINATION Hydrophytic Vegetation Present? (Yes) No Hydric Soils Present? Is this Data Plot within a wetland? Yes Wetland Hydrology Present? Yes Rationale: TWO CRITERIA ARE LACKING.

		1
Project/Site: ST MARIES FIVER  Applicant/Owner: EMERALS CREEK GARDET CO  Investigator: SELVIR ENVIRORMENTAL		Date: 6-7-9 1998  County: Bonesak  State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

#### VEGETATION

	Indicator	Areal	Cover	Cover Class	<del></del>
Species	Status	Cover (%)	Class	Midpoint	Rank
	Status	COVET (78)	Class	Midporit	MAJIK
Herbs:	FACIO	80	9	85,5	
	THE CO	(8)	2_	10.5	
Corèx vesicaria Federa rubra		·			
		<u> </u>		10.5	
Imas spo				106-5	· · · · · · · · · · · · · · · · · · ·
					· <del>····································</del>
ALLES 1,000 COMPANY DE CONTRACTOR DE CONTRAC			. 418444344444 <del>- 2004 - 2004</del>	******************************	AD-Carlada (Albar - Anna <sub>ala</sub> na da Paras e esc
					······································
Shrubs:					
Silf gos:					·
					<u>,</u>
				·	<del></del>
Saplings:			<del> </del>		
Sapings:			<u> </u>		
			<del> </del>	· · · · · · · · · · · · · · · · · · ·	, <del></del>
					······
Trees:			<del> </del>		
11663.			<del> </del>		
			<u> </u>		
			<del> </del>	de la language a superiori de la language agranda agranda ag	***************************************
		<del> </del>	<del>                                     </del>		
			<del>                                     </del>		
Percent of Dominant Species that are OBL, FACW, or FAC	excluding FAC-	<u> </u>		572	
1 Glocili di Dollindrit openica trat are ODE, i notti, di 1 At	, onotony i no.				
Remarks:				·	
rongino.					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

SOLLS

		ŧ		<u> الممارك الحالم</u> Soil Profile		On Hydric Soils List? (	Yes) (No
epth	Horizon	Matrix Color	Mottle (	***************************************	lottle Abundance/Contr	maging and with the same and an experience of the contract of the same and the same of the	ucture, etc
0-12		104R 2/2	71241	2415	Comman	F. Sondy Loan	***************************************
12-18+		104R 3/3		2415	Common	- C ( )	٠,
					**************************************		
							1. 44 14 A. 1 A
ydric Soil	Indicators:						
	Histosol			_	Concretions		
	Histic Epi	·		_		nt in Surface Layer in Sandy Soils	5
	Sulfidic C		ě		Organic Streaking in Listed on Local Hyd	*	
		oisture Regime		_	Listed on National F		
	Reducing	g Conditions or Low-Chroma Colo	ore	•	Other (Explain in Re	*	
	Gieyed 0	n LOW-CHICINA COR	JI S		Other (Explain in the	irminoj	
Remarks:	11 -			V=10 C 1	~ 311 32c~	10221 65 124 2	
william.						37-2401 70 MOTAI	irm
	401721 V	JG CHTCH	6 CE	TERIA	<u>s).                                    </u>		
				<u> </u>			
				HYDF	ROLOGY		
	_						
Reco	rded Data (Desc	cribe in Remarks):			Wetland Hydrology	Indicators:	
		ke, or Tidal Gage		,	Primary Indica		
	Aerial Photo	ographs		٠	Inu	ndated	
/-	Aerial Photo Other (Expla	ographs ain in Remarks)			InuSat	ndated urated in upper 12 inches	
/-	Aerial Photo	ographs ain in Remarks)			Inu Sat  Wa	ndated urated in upper 12 inches ier Marks	
/-	Aerial Photo Other (Expla	ographs ain in Remarks)			Inu Sat Wa Drif	ndated urated in upper 12 inches ter Marks t Lines	
No F	Aerial Photo Other (Explanation Accorded Data A	ographs ain in Remarks)			Inu Sat Wa Drif See	ndated urated in upper 12 inches ter Marks t Lines liment Deposits	
/-	Aerial Photo Other (Explanation Accorded Data A	ographs ain in Remarks)		·	Inu Sat Wa Drif Sec Dra	ndated urated in upper 12 inches ier Marks t Lines liment Deposits inage Patterns in Wetlands	
No Field Obse	Aerial Photo Other (Explanation Articles)  Aecorded Data Articles  Tyations:	ographs ain in Remarks) Available		· · · · · · · · · · · · · · · · · · ·	Inu Sat Drif Sec Drace Secondary Inc	ndated urated in upper 12 inches ter Marks It Lines liment Deposits inage Patterns in Wetlands licators (2 or more required):	inahaa
No Field Obse	Aerial Photo Other (Explanation Accorded Data A	ographs ain in Remarks) Available	>-12	inches	Inu Sat Wa Drif Sec Drace Secondary Inc Ox	ndated urated in upper 12 inches ter Marks t Lines liment Deposits inage Patterns in Wetlands licators (2 or more required): dized Root Channels in upper 12	inches
No Field Obse	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available er:	<u> </u>		Inu Sat Wa Drif Sec Drace Secondary Inc Oxi Oxi Wa	ndated urated in upper 12 inches ter Marks I Lines liment Deposits inage Patterns in Wetlands dicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves	inches
No Field Obse	Aerial Photo Other (Explanation Articles)  Aecorded Data Articles  Tyations:	ographs ain in Remarks) Available er:	S-12	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Ox Wa Loc	ndated urated in upper 12 inches iter Marks It Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves ial Soil Survey Data	inches
No Field Obse	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-		Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches iter Marks It Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves al Soil Survey Data	inches
No Field Obse	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth Depth	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	76-	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available eer:	No No	inches	Inu Sat Wa Drif Sec Dra Secondary Inc Oxi Va Loc FAG	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth Depth Remarks:	Aerial Photo Other (Explanation Aerial Photo Other (Explanation Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo Aerial Photo	ographs ain in Remarks) Available  er:  n Pit:  oil:	No No	inches	Inu   Sat   Wa   Sec   Dra   Secondary Inc   Wa   Loc   FAt   Oth	ndated urated in upper 12 inches ter Marks I Lines Iliment Deposits inage Patterns in Wetlands Ilicators (2 or more required): dized Root Channels in upper 12 ter-Stained Leaves al Soil Survey Data C-Neutral Test	inches
No Field Obse Depth Depth Depth Remarks:	Aerial Photo Other (Explaneorded Data Aerial Photo Recorded Data Aerial Photo Recorded Data Aerial Recorded Data A	ographs ain in Remarks) Available  er:  n Pit:  oil:	WE WE	inches inches	Inu   Sat   Wa   Sec   Dra   Secondary Inc   Wa   Loc   FAt   Oth	ndated urated in upper 12 inches iter Marks I Lines Itiment Deposits inage Patterns in Wetlands Iticators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves ital Soil Survey Data C-Neutral Test iter (Explain in Remarks)	inches 'es No
No Filed Obse Depth Depth Depth Remarks:	Aerial Photo Other (Explanement of Data Aerial Photo Other (Explanement of Data Aerial Photosis)  To Surface Water in the Saturated Society of Saturated Soc	ographs ain in Remarks) Available eer:	WE:	inches inches  TLAND C	Secondary Inc. Second	ndated urated in upper 12 inches iter Marks I Lines Itiment Deposits inage Patterns in Wetlands Iticators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves ital Soil Survey Data C-Neutral Test iter (Explain in Remarks)	
No Field Obse Depth Depth Depth Remarks:	Aerial Photo Other (Explanations: of Surface Water in to Free Water in to Saturated So Vegetation Presidence:	ographs ain in Remarks) Available eer:	WE	inches inches TLAND E	Secondary Inc. Second	ndated urated in upper 12 inches iter Marks I Lines Itiment Deposits inage Patterns in Wetlands Iticators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves ital Soil Survey Data C-Neutral Test iter (Explain in Remarks)	
No F letel Obse Depth Depth Depth Remarks:	Aerial Photo Other (Explaneorded Data Aerial Photo Treations: Of Surface Water in To Free Water in To Saturated So Saturated So Vegetation Present? Idrology Present	ographs ain in Remarks) Available eer:	WE Yes	inches inches TLAND E No No No	Sat  Wa  Drift  Secondary Inc  Secondary Inc  Va  Loc  FAI  Oth  Sthis Data Plot with	ndated urated in upper 12 inches iter Marks I Lines Itiment Deposits inage Patterns in Wetlands Iticators (2 or more required): dized Root Channels in upper 12 iter-Stained Leaves ital Soil Survey Data C-Neutral Test iter (Explain in Remarks)	

Project/Site: ST, MARIES RIVER Applicant/Owner: EMERALD (DEEK GARDET) Investigator: SELKIRK ENVIRONMENTAL	۵	Date: 6-7-9 1998  County: Rongwook  State: #D
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

VEGETATION									
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class	Donk				
Species	Status	COVEL (76)	U1038	Midpoint	Rank				
Herbs:			<del></del>						
Testice Conce	FACT	100		93/					
Corex vesicaria		7							
			************	93					
Shrubs:									
	<u> </u>	<u> </u>			······································				
Canlinga		<del> </del>							
Saplings:	<del></del>	<del> </del>							
		<b></b>							
				, <u> </u>					
		<u> </u>		-					
Trees:	<del> </del>								
		<b></b>							
**************************************									
		<u> </u>							
		1	<u></u>						
Percent of Dominant Species that are OBL, FACW, or FAC	excluding FAC-:		(20)	8					
Remarks:									
		·							

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (63.0); 6=76-15% (63.0); 6=76-15% (10.5); 6=76-15%95% (85.5); 7 = 96-100% (98.0).

Map Unit Na	me (Series and	Phase): tokey	- Typic Fl	الحامر	0-48	_		
l axonomic (	lassification:	jase paning				On Hydric Soils List	i (les) (NO)	
Depth	Horizon	Matrix Color	Mottle Color	<del></del>	Abundance/Contrast		ons, Structure, etc.	
0~10		10YR 2/2	-		***************************************	and help to provide the held has a part of med high particular desired by 1 to 5 and	y Loan	
10-16		16/12 3/2		1			Ly Loan	
16-18+		104P 3/3	7'24R 415	1	Few		- can	
Hydric Soil I	ndicators:			J				
	Histosol		,	(	Concretions			
	Histic Epi	pedon	$\prec$		High Organic Content in	n Surface Layer in Sa	ndy Soils	
	Sulfidic O	dor		(	Organic Streaking in Sa	ndy Soils		
	Aquic Moi			1	isted on Local Hydric S	Soils List		
	Reducing	Conditions			Listed on National Hydr			
	Gleyed or	Low-Chroma Color	rs	(	Other (Explain in Remar	rks)		
Remarks:								
			нү	DROL	OGY			
Recor	rded Data (Desc	ribe in Remarks):	÷		Wetland Hydrology Inc	dicators:		
	•	e, or Tidal Gage		- 1	Primary Indicators			
	Aerial Photo				Inundat	ted		
	Other (Expla	in Remarks)		1	Saturat	ed in upper 12 inche	s	
No F	Recorded Data A	vailable		ļ	/ Water N	Marks	•	
					Drift Lir	nes		
				1	, <u>-</u>	ent Deposits		
Field Obser	vations:			1	· -	ge Patterns in Wetlar		
			~	ŀ		tors (2 or more requi		
Depth	of Surface Water	er:	o inches		<del></del>	ed Root Channels in I	upper 12 inches	
			ı		Water-Stained Leaves			
Depth	to Free Water in	n Pit: <u></u>	10 inches	1	Local Soil Survey Data			
Depth	to Saturated So	il:	n/o inches			eutral Test Explain in Remarks)		
Remarks:		<u></u>	1	1				
ı								
			WETLAND	DET	ERMINATION			
Hydrophytic	Vegetation Pres	sent?	Yes No					
Hydric Soils	-		Yes No		Is this Data Plot within	a wetland?	Yes (No)	
Wetland Hy	drology Present	?	Yes (No)					
Rationale:								
I	TWO CR	MEDIA AD	E LACKIN	(S- 6				

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK GARNET  Investigator: SEXIR ENVIRONMENTAL	470	Date: 6-7-9 1998 County: Benevan State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

<u>VEGETATION</u>								
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank			
lerbs:								
Agrastis attantiera +	FAC	35	4	38	2			
Albecurus pralansis *	FACW	55	5	63				
Chre southernm texandremen		<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	101				
Pontago Incedata		T		()				
		· ·						
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
					·····			
Shrubs:								
	· · · · · · · · · · · · · · · · · · ·							
Saplings:								
Trees:								
			,					
				1				
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:			0070	<del></del>			
Remarks:								

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-10%95% (85.5); 7 = 96-100% (98.0).

			- Typic F-10		Drainage Class: SW tox - Poor				
Taxonomic C	lassification:	<u>viase loony</u>		ried Mixed Typic	On Hydric Soils List? (Yes) (No)				
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contra	manginates ships				
0 - 13	TROTZOTT	1048 2/1			Silloan				
13-21-		W123/2	7/24R 4/6	Few					
10 41		018-2/2	1121K 116	1 20	Sorbitan				
lydric Soil I	ndicators:	1							
	Histosol			Concretions					
•	Histic Ep	pipedon		High Organic Conte	ent in Surface Layer in Sandy Soils				
	Sulfidic (			Organic Streaking in					
		oisture Regime		Listed on Local Hyde					
		g Conditions		Listed on National H					
		or Low-Chroma Colo	ore	Other (Explain in Re					
•		or Low Comornia Con	,,,	Other (Explain)	, individual control of the control				
Remarks: I	20 21201630	CALBUTIS	WE DOE T	OFAR BELOW	THE 2007 200E				
		HYDRIC.		- ,					
· .		177000							
<u> </u>	_								
			НҮ	DROLOGY					
Door	dad Data (Das	oribo in Domarka):		   Wetland Hydrology	Indicators:				
necon	•	cribe in Remarks):							
		ke, or Tidal Gage		Primary Indica					
	Aerial Photo	•		· -	Inundated				
		ain in Remarks)		1	urated in upper 12 inches				
No R	ecorded Data /	Available		· , —	ler Marks				
			· · · · · · · · · · · · · · · · · · ·	<del></del>	t Lines				
				Sed	liment Deposits				
Field Obser	vations:				inage Patterns in Wetlands				
				Secondary Ind	licators (2 or more required):				
Depth	of Surface Wat	ler:	inches	Oxio	Oxidized Root Channels in upper 12 inches				
				Wa	Water-Stained Leaves				
Depth	to Free Water i	in Pit: <u> </u>	inches	Loc	at Soil Survey Data				
•					C-Neutral Test				
Depth	to Saturated S	oil:	n inches	Oth	er (Explain in Remarks)				
Remarks:									
		·							
			WETLAND	DETERMINATION					
	Vegetation Pre	esent?	Yes No						
Hydric Soils			Yes No	Is this Data Plot with	hin a welland? Yes No				
-	r resent: Irology Present	1?	Yes No		100				
	nology i lesell		163 (10)	<u> </u>					
Rationale:			ـ ما	~~.\V					
	OW!	CRITERIA	DEE UN	CKINGO					

Project/Site: ST MARIES RIVER Applicant/Owner: EMERGED CREEK GARDET LTD Investigator: SOURDE ENVIRONMENTE	Date: 6-7-9 (998 County: Bonewah  State: III	
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Yes  Yes  Yes  Yes  Yes	(No) Transesct ID:	

**VEGETATION** 

	VEGETATIO	7		,	
	Indicator	Areal	Cover	Cover Class	l
Species	Status	Cover (%)	Class	Midpoint	Hank
	Otalus	00101 (10)		шоронц	TIGITK .
Herbs:					
Apoecrus pratensis *	FACW	75	6	85.5	
Agrostis ctolonillera		(5	2_	10.5	
Pholois aurodinarea		10	2	10.5	
Raninalus repons			*************		······································
MOTORIOGN 155		3		106-5	
-A	***************************************		مين وري بداخته مها ۱۰۰ مده د مده د مده د مده د مده د مده د مده د مده د مده د مده د مده د مده د مده د مده د مده	***************************************	
					····
Shrubs:					
,					
		<del> </del>			
Saplings:					
Trees:					
11600.					
			<del> </del>		
THE CONTRACT OF THE CONTRACT O			<b> </b>		***************************************
	<u> </u>		<b></b>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100	70	
Remarks:					
					ł
			المراوات المساور المساور	ويرسون فاستخدا المينور المست	

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

	Classification.		000 0000 0	iteleral mixed Typic		3) (No			
		· ·	Soil Pro	file Description 🖰 🌣	rogall				
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Struct	ure, etc.			
0-10		IONE SII			Coan				
10-15		1015 315	7542415	Common	Loany sond				
lydric Soil	Indicators:	<u> </u>	_ <del></del>		<u> </u>				
	Histosol			Concretions					
	Histic Epi	pedon		High Organic Content in	Surface Layer in Sandy Soils				
	Sulfidic O	dor		Organic Streaking in Sa	ndy Soils				
	Aguic Moi	isture Regime		Listed on Local Hydric S	Soils List				
	Reducing	Conditions		Listed on National Hydr	ic Soils List				
	Gleyed or	Low-Chroma Cole	ors	Other (Explain in Remai	ks)				
Remarks:									
			нү	DROLOGY					
Reco	Stream, Lake Aerial Photo	ribe in Remarks): e, or Tidal Gage graphs iin in Remarks)		Primary Indicators	Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches Water-Stained Leaves Local Soil Survey Data				
No I	Recorded Data A		_	Water I					
Field Obse	rvations:			Draina					
Depth	of Surface Wate	er: <u> </u>	> - 6 inches	Oxidize					
Depth	n to Free Water in	ı Pit: <u> </u>	inches						
Depth	n to Saturated So	il:	inches		FAC-Neutral Test Other (Explain in Remarks)				
Remarks:									
					<del></del>				
			LUPTA AND	DETERMINATION					
			WETLAND						
	c Vegetation Pres	sent?	Yes No			` .			
Hydric Soil:	s Present?		Yes No	Is this Data Plot within	a wetland? Yes	No			
Hydric Soil:	_		Yes No		a wetland? Yes	) No			

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK BARNET CTT  Investigator:	<u> </u>	Date: 5-7-9 1998 County: Beneval State: ID
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No	Community ID: Transesct ID: Plot ID:

### **VEGETATION**

Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Agrestic Stolonifera #	FAC	60	5	63	(
Feetoca Nora		(S	2_	(0.5	
Alopecurus pralensis *	FACIN	40	4	38.0	2_
				[11.2	
Shrubs:					
			·,		
			***************************************		
				<u> </u>	
Saplings:					
Trees:					
				<del></del>	
		<b></b>			<b></b>
			<del> </del>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100	>>>	
Remarks:		····			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOLLS

Man Unit Nar	me (Series and I	Phase); toke		eques 0-470	Drainage Class: SW ₹	oce - Hoore			
		sarse loany is		dalmixed Traica	On Hydric Soils List?	Yes No			
			Soil Profi	le Description 🐪 🕜	mayoll				
epth	Horizon	Matrix Color	Mottle Color   1	Mottle Abundance/Contras	t Texture, Concretions,	Structure, etc.			
0-11		1042211		<del>-</del>	Fire Sondy	loan			
1-21		1648312			Loany So	$\sim$			
21-30+	***************************************	10424/2	7/248 415	Common		16 Y			
21 30		1012							
ydric Soil I	ndicators:					<del> </del>			
	Histosol		_	Concretions					
	Histic Epip	oedon	₹ .	High Organic Conten	t in Surface Layer in Sandy	Soils			
•	Sulfidic Or			Organic Streaking in S	Sandy Soils				
•	Aquic Moi		! _	Listed on Local Hydric					
•	Reducing		_	Listed on National Hy	dric Soils List				
,		Low-Chroma Colo	rs	Other (Explain in Rem					
		^= \ <u>`</u>	5.CA . C.ST	IN AVCE TO	PAR-RAUL				
emarks:	TCOT	PE ( 1) 24	er results	i - Myce 10	- 6				
Non	-HORIC	- 85000	me cono	a 600 euros					
			НҮД	ROLOGY					
Pacor	ded Data (Desci	ribe in Remarks):		Wetland Hydrology	Indicators:				
110001	<del>-</del>	e, or Tidal Gage		Primary Indicate					
	Aerial Photo	=		<u> </u>	Inundated				
		in in Remarks)			rated in upper 12 inches				
VI. D	Other (Explainment)  ecorded Data A				r Marks				
No H	ecorded Dala A	valiable		, <del></del>	Lines				
	<del></del>		<del></del> -	<del></del>					
				, ,	ment Deposits				
eld Obser	vations:			· · · · · · · · · · · · · · · · · · ·	nage Patterns in Wetlands				
					Secondary Indicators (2 or more required):				
Depth	of Surface Wate	er:	inches		Oxidized Root Channels in upper 12 inches				
			1		er-Stained Leaves				
Depth	to Free Water in	Pit:	inches inches	Loca	Local Soil Survey Data				
				FAC	-Neutral Test				
Depth	to Saturated So	il:	∑ inches	Othe	r (Explain in Remarks)				
lemarks:					<u></u>				
				······································	<del></del>				
<del>-</del>				DETERMINATION		<del></del>			
-	Vegetation Pres	sent?	Yes No	Ja Aleia Piaka Pika o 25	in a watland?	Va= (11			
lydric Soils		_	Yes (No	Is this Data Plot with	in a welland?	Yes No			
	drology Present	?	Yes (No)						
lationale:									
		~ ~ · ^ -	· / ^ ~ ~ ·	<b>V</b> .					
(	WO CRI	ITERIA HE	is lacking						

Project/Site: ST MARIES RIVER Applicant/Owner: EMERALD CREEK GARNET LA Investigator: SEDCIRK ENVIRONMENTAL		Date: 6-7-9 1998 County: Bonewith State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: M-46

#### **VEGETATION**

	VEGETATIO	<u> </u>		<del>,</del>	
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					
	PAC-	55	5	63	)
The Control of the Co	FACW	40	4	38	
HOGOSIOZ PISTANOZ	r ACVO	40		30	
Circian as ase		,			************************
Chrysanthemen lexanthemen		16	2	10.5	<del> </del>
		**************************************		111.5	
				110-	·····
			*******************		***************************************
					_
Shrubs:					
					······································
					·
		<del> </del>	<b> </b>		······································
Saplings:					
					····
					***************************************
Trees:					-
	<u> </u>				***************************************
			1		
			<del> </del>		
		<u> </u>			L
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		505	lo	
	···		<u> </u>		
Remarks: MARCINALLY POETTIVE V	FGETATO	· C.			
10000 101 000 1000 0		•			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Map Unit Na	me (Series and	d Phase): Brey Coase bany	- Typic Flu	read mived Typica	Drainage Class: SWRCE - On Hydric Soils List? (Yes)	130 P	
raxonomic	Classification.	CSC CENT			Secoli	340	
Depth 6-2 3-10	Horizon	Matrix Color  1042 3/2  1042 3/3	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure  Loan  Fire Sone Loan  Sandy Loan		
10-16+		1618 A1A	112114 1/16		Same Same		
Hydric Soil	Histosol Histic E Sulfidic Aquic M	pipedon	ors	Concretions High Organic Content in Organic Streaking in Sa Listed on Local Hydric S Listed on National Hydr	Soils List ric Soils List		
Remarks:							
			Н	'DROLOGY			
No F	Recorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) No Recorded Data Available  Field Observations:		Wetland Hydrology Indicators:  Primary Indicators:  Inundated Saturated in upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):				
Ì	of Surface Water		inches inches	Water- Local S	Oxidized Root Channels in upper 12 inches Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test		
Depth	to Saturated S	Soil:	h o inches		(Explain in Remarks)		
Remarks:			WETLAND	DETERMINATION			
Hydric Soils	Present? drology Preser	esent? Warqinal	Yes No Yes No	Is this Data Plot within	a wetland? Yes (	No	
	(MO (	TELLIERIEN P	ACZ CONCE!				

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK GARNET LTD  Investigator: SELFIRK ENVIRONMENTAL		Date: 6-7-9 1998 County: Benevan State: In
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: M-47

	VEGETATIO	, ,	<u> </u>	<del></del>	
	indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
derbs:					
Festiva oralensis	* FACU	35	4	38	
Abrostis stobnisera	* FAC	30	4	38	(
Albocuse producis		20	3-	20.5	
Acopyran repons		15	2	10.5	i
				107	
			<u> </u>		
			<del> </del>		<del> </del>
		<b></b>	<b>*</b>		
Shrubs:			<del> </del>		<del> </del>
Sillubs:			<del> </del>		
		<del> </del>			
		1			
		+			
		-	-		<del></del>
Saplings:			<del> </del>		<b> </b>
		<b>_</b>			
					<b></b>
			<del> </del>		<b>↓</b>
Trees:		<b></b>	ļ		
		<del></del>			
			<b></b>		
			<u> </u>		
Percent of Dominant Species that are OBL, FACW, or FA	C, excluding FAC-		50%		
<u> </u>					
Remarks: MARGINALLY POSITIVE	VEGETER	Cass			
( ) Comment of the co	•				

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15%95% (85.5); 7 = 96-100% (98.0).

Map Unit Na Taxonomic	ame (Series and Classification: <sup>(</sup>	d Phase): Toke	rusic Flo	vagoent	s 0-470 Ked Turica	Drainage Class: $\underline{\mathcal{L}}$ On Hydric Soils List'	
	Old Colling College				iption Cryag		
Depth 0-5 5-15 15-25	Horizon	Matrix Color 10YR 3/2 16YR 4/2 16YR 3/2	Mottle Color		indance/Contrast د	Texture, Concretion  Soan  Fire Sond  Fire Sond	yloun
Hydric Soil	Indicators:		1		<del>_</del>	<u> </u>	
	Reducin Gleyed	pipedon Odor lolsture Regime ng Conditions or Low-Chroma Cok	EATURES 1	High Orgal Listed Listed Other	nic Streaking in San d on Local Hydric So d on National Hydric (Explain in Remark	oils List Soils List	
<u> </u>				YDROLOG	Υ		<u></u>
No I Field Obse Depth Depth	Stream, Lai Aerial Phot Other (Exp	lain in Remarks) Available ter: in Pit:	inches inches		Water M Drift Line Sedimer Drainage Secondary Indicate Oxidized Water-S Local Sc FAC-Ne	ed d in upper 12 inches larks	ds ed):
<del></del>							
			/	DETER	MINATION		
Hydric Soil:	c Vegetation Pro s Present? odrology Presen	esent?Magird	Yes No Yes No	ls th	is Data Plot within a	wetland?	Yes N
	Two C	21TERIA A	ree Lack	26			

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERACO (DEEX GARNET Investigator: SELVIRY ENVIRONMENTAL	GD_	Date: 6-7-9 1998 County: Benevan State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: M48

VEGETATION							
	Indicator	Areal	Cover	Cover Class	_		
Species	Status	Cover (%)	Class	Midpoint	Rank		
lerbs:							
TITE OFFER SECTIONS	* FACU	45	4	38			
Absocurds pratensis	* FACIN	40	4	38	(		
Agrostis stolonitera		15	2	10.5			
The state of the s							
				- 861 <del>5</del>			
والمرابعة والمرا		معادية الأمور والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع		***************************************			
		***************************************			***************************************		
			<del></del> -				
Shrubs:							
	<u> </u>						
					<u></u>		
Saplings:							
					<u> </u>		
				*****************************			
rees:					<del>                                     </del>		
1662			<del> </del>	·	<del> </del>		
			1		<del> </del>		
مادة ويود ويود والمداخلة ليناه والمداورة والمد			<del></del>		<del> </del>		
				<u> </u>	<del> </del>		
					<del> </del>		
					<u> </u>		
Percent of Dominant Species that are OBL, FACW, or FA	C, excluding FAC-:	·	52	) /0			
		···.					
Remarks: MARGINALLY POSITIUS	THETHER U:	60					
In House Library							
					•		

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 6=76-15% (10.5); 1=1-5%95% (85.5); 7 = 96-100% (98.0).

·····		,	Soil Pro	ofileDescription 🐪	Crycepoll
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contra	
0-3		DYR 3/2			Loan
3 -11		104233			Fre Sondy Loain
( ) - 1		10NR 4/3	72424/6	Few	Fore Sondy Coan
dric Soil	I Indicators:				
	Histosol	l		Concretions	
	Histic Ep	pipedon .	A	High Organic Conte	nt in Surface Layer in Sandy Soils
	Sulfidic (	Odor	$\swarrow$	Organic Streaking in	Sandy Soils
	Aquic M	loisture Regime	1	Listed on Local Hydr	ic Soils List
	Reducin	g Conditions		Listed on National H	ydric Soils List
	Gleyed o	or Low-Chroma Colo	ors	Other (Explain in Re	marks)
emarks:					
<u>.</u>			ну	'DROLOGY	· · · · · · · · · · · · · · · · · · ·
Reco	orded Data (Des	cribe in Remarks):		Wetland Hydrology	Indicators:
Reco		cribe in Remarks): ke, or Tidal Gage		Wetland Hydrology Primary Indica	
Reco		ke, or Tidal Gage		Primary Indica	
Reco	Stream, Lal Aerial Photo	ke, or Tidal Gage		Primary Indica	tors:
 - /	Stream, Lal Aerial Photo	ke, or Tidal Gage ographs lain in Remarks)		Primary Indica Inum Satu Wate	tors: Idated Irated in upper 12 inches er Marks
 - /-	Stream, Lal Aerial Photo Other (Expl	ke, or Tidal Gage ographs lain in Remarks)		Primary Indica Inum Satu Wate	tors: idated urated in upper 12 inches
 - /-	Stream, Lal Aerial Photo Other (Expl	ke, or Tidal Gage ographs lain in Remarks)		Primary Indica Inun Satu Wat Drift Sed	tors: Idated  Lirated in upper 12 inches  er Marks  Lines  iment Deposits
No	Stream, Lal Aerial Photo Other (Expl	ke, or Tidal Gage ographs lain in Remarks)		Primary Indica Inun Satu Wat Drift Sed Drail	tors: Idated Idated In upper 12 inches Idated In upper 12 inches Idated In upper 12 inches Idated In upper 12 inches Idated In upper 12 inches Idated Inches
No No lield Obse	Stream, Lal Aerial Phote Other (Expl Recorded Data	ke, or Tidal Gage ographs lain in Remarks) Available		Primary Indica Inun Satu Wate Drift Sed Drai Secondary Ind	tors: idated urated in upper 12 inches er Marks Lines iment Deposits inage Patterns in Wetlands icators (2 or more required):
No No lield Obse	Stream, Lal Aerial Photo Other (Expl Recorded Data	ke, or Tidal Gage ographs lain in Remarks) Available	inches	Primary Indica Inum Satu Wat Drift Sed Drai Secondary Ind	tors: idated urated in upper 12 inches er Marks Lines iment Deposits inage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches
No No Dept	Stream, Lal Aerial Photo Other (Expl Recorded Data / ervations:	ke, or Tidal Gage ographs lain in Remarks) Available	1	Primary Indica Inum Satu Wat Drift Sed Drai Secondary Ind Oxio Wat	tors: Idated Idated Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches
No lield Observed	Stream, Lal Aerial Phote Other (Expl Recorded Data	ke, or Tidal Gage ographs lain in Remarks) Available	inches	Primary Indica  Inun Satu Wate Drift Sed Drai Secondary Ind Wate Local	tors: idated urated in upper 12 inches er Marks Lines iment Deposits inage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ier-Stained Leaves al Soil Survey Data
No No Dept Dept	Stream, Lal Aerial Photo Other (Expl Recorded Data / ervations:	ke, or Tidal Gage ographs lain in Remarks) Available ter:	1	Primary Indica  Inum Satu Wate Drift Sed Drai Secondary Ind Wate Loca FAC	tors: Idated Idated Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches Idated Root Channels in upper 12 inches
No No Dept Dept Dept	Stream, Lal Aerial Photo Other (Expl Recorded Data a ervations: Third of Surface Water in third to Saturated Seconds	ke, or Tidal Gage ographs lain in Remarks) Available ter:	inches	Primary Indica  Inum Satu Wate Drift Sed Drai Secondary Ind Wate Loca FAC	tors: Indated Indated Indated in upper 12 inches Indated in upper 12 inches Indated in upper 12 inches It Lines Iment Deposits Image Patterns in Wetlands Indated Root Channels in upper 12 inches Indicators (2 or more required): Indicators (2 or more required): Indicators (3 or more required): Indicators (4 or more required): Indicators (5 or more required): Indicators (6 or more required): Indicators (7 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (10 or more required):
No No Dept Dept Dept	Stream, Lal Aerial Photo Other (Expl Recorded Data a ervations: Third of Surface Water in the Saturated Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Sec	ke, or Tidal Gage ographs lain in Remarks) Available ter:	inches	Primary Indica  Inum Satu Wate Drift Sed Drai Secondary Ind Wate Loca FAC	tors: Indated Indated Indated in upper 12 inches Indated in upper 12 inches Indated in upper 12 inches It Lines Iment Deposits Image Patterns in Wetlands Indated Root Channels in upper 12 inches Indicators (2 or more required): Indicators (2 or more required): Indicators (3 or more required): Indicators (4 or more required): Indicators (5 or more required): Indicators (6 or more required): Indicators (7 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (10 or more required):
No No Dept Dept	Stream, Lal Aerial Photo Other (Expl Recorded Data a ervations: Third of Surface Water in the Saturated Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Seconds Sec	ke, or Tidal Gage ographs lain in Remarks) Available ter:	inches inches	Primary Indica  Inum Satu Wate Drift Sed Drai Secondary Ind Wate Loca FAC	tors: Indated Indated Indated in upper 12 inches Indated in upper 12 inches Indated in upper 12 inches It Lines Iment Deposits Image Patterns in Wetlands Indated Root Channels in upper 12 inches Indicators (2 or more required): Indicators (2 or more required): Indicators (3 or more required): Indicators (4 or more required): Indicators (5 or more required): Indicators (6 or more required): Indicators (7 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (10 or more required):
No No Dept Dept Dept Demarks:	Stream, Lal Aerial Phote Other (Expl Recorded Data a ervations: Third Surface Water in Third to Saturated Seconds	ke, or Tidal Gage ographs lain in Remarks) Available ter:	inches inches  WETLAND  Wes No	Primary Indica Inun Satu Wat Drift Sed Drai Secondary Ind Oxio Wat Loca FAC Othe	tors: Indated Indated Indated in upper 12 inches Indated in upper 12 inches Indated in upper 12 inches It Lines Iment Deposits Image Patterns in Wetlands Indated Root Channels in upper 12 inches Indicators (2 or more required): Indicators (2 or more required): Indicators (3 or more required): Indicators (4 or more required): Indicators (5 or more required): Indicators (6 or more required): Indicators (7 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (8 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (9 or more required): Indicators (10 or more required):
No  Peld Obse  Dept  Dept  Dept  emarks:	Stream, Lal Aerial Phote Other (Expl Recorded Data a ervations: Third Surface Water in Third to Saturated Seconds	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit: coil:	inches inches  WETLAND  Wes No	Primary Indica Inun Satu Wat Drift Sed Drai Secondary Ind Oxio Wat Loca FAC Othe	tors: Idated Ida
No No No Dept Dept Dept emarks:	Stream, Lal Aerial Photo Other (Expl Recorded Data / ervations: Thi of Surface Water in thi to Free Water in this Saturated So	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit: oil:	inches inches  WETLAND  Wes No	Primary Indica Inum Satu Wat Drift Sed Drai Secondary Ind Oxio Wat Loca FAC Othe	tors: Indated
No  Pept Dept Dept emarks:	Stream, Lal Aerial Photo Other (Expl Recorded Data A ervations: Third Surface Water in third to Free Water in third Saturated Si third Saturated Si is Present? Tydrology Present	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit: oil:	wetland  Yes No	Primary Indica Inum Satu Wat Drift Sed Drai Secondary Ind Oxio Wat Loca FAC Othe	idated urated in upper 12 inches er Marks Lines iment Deposits inage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches ier-Stained Leaves al Soil Survey Data c-Neutral Test er (Explain in Remarks)

Project/Site: ST MARIES RIVER	Date: 6-7-9 1998
Applicant/Owner: EMPRAIN (REEK GARNES LTD	County: Bonewah
Investigator: SECKIEX ENVIRON METOTAL	State:
Do Normal Circumstances exist on the site?  Yes No.	Community ID:
Is the site significantly disturbed (Atypical Situation)?  Yes No	Transesct ID:
Is the area a potential Problem Area?	Plot 10:

### **VEGETATION**

Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Agrostic stolarilera	FAC	20	3	205	(
Photograma macea		5		3	
Pou materis	FAC	10	2	10.5	72_
			-	34	
	*****************************			25(	· Santanananananananananananananananananan
BARS CROWN		65			
	***************************************	**************************************			***************************************
			L		
Shrubs:					
Cratagus douglasii +	PAC	45	4	35/	
				100	
			: :	<u> </u>	
	<b> </b>				
Saptings:	ļ	ļ			
	<u></u>	<del> </del>			
Trees:					
	<del> </del>	<b></b>			
The second secon				***************************************	
	<u> </u>	-			-
	<del>                                     </del>		<u></u>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:			(00)	
Remarks:					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

				respense 0.46	Drainage Class: SW Hook - Hook
Taxonomic	Classification: (	Caro prani		icelated mixed Typic A	On Hydric Soils List? (es No
Donth	Liorizon	Matrix Color			690011
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0.2		101R 3 2			Lean
5-17	-	10423/3			Sondy Coon
17-18		1015 8/1			Mozana Ash (Si(t)
18+		1048 4/2	76424/6	Common	Sondy Coam
Hydric Soil	Indicators:		· · · · · · · · · · · · · · · · · · ·	<u> </u>	
	Histosol			Concretions	
	Histic Ep	ipedon		High Organic Content in	Surface Layer in Sandy Soils
	Sulfidic C	Odor		Organic Streaking in Sa	ndy Soils
		oisture Regime		Listed on Local Hydric S	
		g Conditions		Listed on National Hydr	ic Soils List
	Gleyed o	r Low-Chroma Color	rs	Other (Explain in Remar	ks)
Remarks:	RESOKIM	ERPHIC FE	CATCRES	HERTO DEEP H	S BE HIDEIC
		· ·			
			НҮ	DROLOGY	
	Stream, Lak Aerial Photo	ain in Remarks)		/ Water N	ed ed in upper 12 inches Marks
Field Obser	vations:			Drainag	nt Deposits le Patterns in Wetlands
Depth	of Surface Wate	er:	inches	Oxidize	ors (2 or more required): d Root Channels in upper 12 inches
Damata	ta Face Minter i	Da. 10	1 - in-han	i '	Stained Leaves
Debtu	to Free Water in	11	(a inches		oil Survey Data
Depth	to Saturated Sc	oil: <u> </u>	inches		eutral Test Explain in Remarks)
Remarks:					
<u></u>					
			WETLAND	DETERMINATION	
Hydric Soils	Vegetation Pre Present? drology Present		Yes No Yes No Yes No	Is this Data Plot within a	wetland? Yes No
Rationale:		· · · · · · · · · · · · · · · · · · ·			
·	Two (	PITERIA	ADE LA	socnite.	

Project/Site: ST MARIES RIVER Applicant/Owner: EMERAN CREEK GARNET CO Investigator: SPLARK ENVIRONMENTAL		Date: 6-7-9 1998  County: Renewal  State:
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)? HAY (ALD Yes)  Is the area a potential Problem Area?  Yes	(3) 5 (E)	Community ID: Transesct ID: Plot ID: M~ 50

VEGETATION								
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank			
Herbs:								
Alapaurus pratensis *	FAEW	100	7	78/				
	· · · · · · · · · · · · · · · · · · ·			198				
					***************************************			
Shrubs:					<del>* List</del>			
					······································			
Santingo.								
Saplings:								
Trees:								
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100	<i>b</i>				
Remarks:								

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15%95% (85.5); 7 = 96-100% (98.0).

<u>arononio</u>	Classification: 4			andia Endoagualf	
			Soil Pro	file Description	
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contra	
0.8		1012 1/1	_		Siltlean
8-17+		10424/1	7348 415	کدیــــــــــــــــــــــــــــــــــــ	Silt Loan-Silt, Conta
~~~~					` (
			<u> </u>		
lydric Soil	Indicators:				
	Histosol			Concretions	
	Histic Ep	pipedon		High Organic Conte	nt in Surface Layer in Sandy Soils
	Sulfidic (			Organic Streaking in	
		oisture Regime		Listed on Local Hydr	
		g Conditions		Listed on National H	
		or Low-Chroma Colo	ors	Other (Explain in Rei	=
			·		
Remarks:					
<del></del>			<del></del>		
			ЦV	PROLOCY	
			пт	DROLOGY	
				DROLOGY	<del></del>
Reco	rded Data (Des	cribe in Remarks):			Indicators:
		cribe in Remarks):		Wetland Hydrology	
	Stream, Lai	ke, or Tidal Gage		Wetland Hydrology Primary Indicat	tors:
	Stream, Lai Aerial Photo	ke, or Tidal Gage ographs		Wetland Hydrology Primary Indicat	tors: dated
  /-	Stream, Lai Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Primary Indicat Inun Satu	tors: dated trated in upper 12 inches
 	Stream, Lai Aerial Photo	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Primary Indicat Inun Satu	tors: dated rated in upper 12 inches er Marks
  /-	Stream, Lai Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)	- HT	Wetland Hydrology Primary Indicat Inun Satu Unificat Drift	tors: dated trated in upper 12 inches er Marks Lines
No I	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Primary Indicat Inun Satu Under Drift Sedi	tors: dated trated in upper 12 inches er Marks Lines iment Deposits
No I	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sedi	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands
No I	Stream, Lai Aerial Photo Other (Expl Recorded Data /	ke, or Tidal Gage ographs ain in Remarks) Available		Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi	tors: dated trated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required):
No I	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs ain in Remarks) Available	>-4_ inches	Wetland Hydrology Primary Indicat Inun Satu Unift Sedi Drai Secondary Indi	tors: dated trated in upper 12 inches er Marks Lines timent Deposits nage Patterns in Wetlands ticators (2 or more required): dized Root Channels in upper 12 inches
No I	Stream, Lai Aerial Phote Other (Expi Recorded Data / rvations:	ke, or Tidal Gage ographs ain in Remarks) Available	>4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sedi Drai Secondary Indi Oxio	tors: dated irated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves
No I	Stream, Lai Aerial Photo Other (Expl Recorded Data /	ke, or Tidal Gage ographs ain in Remarks) Available		Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sedi Drai Secondary Indi Wate Loca	tors: Idated Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels Irrated Poot Poot Poot Poot Poot Poot Poot Poo
No I	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>-4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Coxic Hydrology Nate Loca FAC	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I	Stream, Lai Aerial Phote Other (Expi Recorded Data / rvations:	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Coxic Hydrology Nate Loca FAC	tors: Idated Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels in upper 12 inches Irrated Poot Channels Irrated Poot Poot Poot Poot Poot Poot Poot Poo
No I	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>-4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Coxic Hydrology Nate Loca FAC	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I  Field Obse  Depth  Depth  Depth	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>-4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Coxic Hydrology Nate Loca FAC	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I Field Obse Depth Depth Depth	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>-4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Coxic Hydrology Nate Loca FAC	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I  Field Obse  Depth  Depth  Depth	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available ter:	>-4 inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Wate Loca FAC Othe	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I No I Pield Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expi Recorded Data / rvations:  of Surface Water into Saturated So	ke, or Tidal Gage ographs ain in Remarks) Available  ter:  oil:	inches inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Wate Loca FAC Othe	tors: dated prated in upper 12 inches er Marks Lines iment Deposits nage Patterns in Wetlands icators (2 or more required): dized Root Channels in upper 12 inches er-Stained Leaves al Soil Survey Data i-Neutral Test
No I No I Pield Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  of Surface Water in	ke, or Tidal Gage ographs ain in Remarks) Available  ter:  oil:	inches inches	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Wate Loca FAC Othe	tors: Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in upper 12 inches Ir
No I No I No I Pield Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations: of Surface Water into Saturated So	ke, or Tidal Gage ographs ain in Remarks) Available  eer:	inches inches  WETLAND	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sedi Drai Secondary Indi Oxio Wat Loca FAC Othe	tors: Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in upper 12 inches Ir
No I No I No I Pield Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations: of Surface Water in to Free Water in to Saturated So Vegetation Press Present?	ke, or Tidal Gage ographs ain in Remarks) Available  eer:	wetland  Wes No	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sedi Drai Secondary Indi Oxio Wat Loca FAC Othe	tors: Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in upper 12 inches Ir
No I No I No I No I Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Cher (Expl Recorded Data / rvations:  of Surface Water in to Free Water in to Saturated So Vegetation Present?	ke, or Tidal Gage ographs ain in Remarks) Available  eer:	wetland  Wes No  Yes No	Wetland Hydrology Primary Indicat Inun Satu Wate Drift Sed Drai Secondary Indi Oxio Wat Loca FAC Othe	tors: Idated Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated in upper 12 inches Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in Wetlands Irrated Patterns in upper 12 inches Ir

Project/Site: ST. MARIES RIVER  Applicant/Owner: EMERALD CREEK GARNET (O Investigator: SCHER ENVIRONMENTAL		Date: <u>6-7-9</u> , 1998  County: <u>Renewall</u> State: <u>LO</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Hay Laws Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: W\~S\

VEGETATION									
Species	Indicator Status_	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank				
Herbs:		00 (0)	0,000	жаротт	Nank				
Absorves gratensis *	FACW	00	7	98/	ı				
1				60					
	<u> </u>			/98	·····				
			······································		***************************************				
Shrubs:									
Saplings:	<u> </u>								
	<u> </u>								
					· · · · · · · · · · · · · · · · · · ·				
Trees:									
					·				
	•								
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		<u> </u>	0%					
Remarks:	<del></del> _			<del></del>	· ····				

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 6=76-15% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5% (10.5); 1=1-5%95% (85.5); 7 = 96-100% (98.0).

		in this ari		Description	On Hydric Soils List? Yes (No				
epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.				
>- <u> </u>	TIOTIZON	WYR 2/1	7212 4/5		Silt Com				
3 - 18-4 3		10484/Z							
>-10		076-116			the way wan				
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~									
,,,,,-m. <u></u>									
/dric Soil	Indicators:								
,	·-		•						
	Histosol		•	Concretions					
	Histic Ep		$\rightarrow$		High Organic Content in Surface Layer in Sandy Soils Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Listed on National Hydric Soils List Other (Explain in Remarks)				
	Sulfidic C		$\mathscr{D}$						
		oisture Regime		<del>-</del>					
		g Conditions							
	Gieyed d	or Low-Chroma Colo	rs	Other (Explain in Remai	KS)				
emarks:									
			!	HYDROLOGY					
	_								
	· · · · · · · · · · · · · · · · · · ·	cribe in Remarks):		Wetland Hydrology Inc					
	Stream, Lal	ke, or Tidal Gage		Wetland Hydrology Inc Primary Indicators	<b>3:</b>				
	Stream, Lak Aerial Photo	ke, or Tidal Gage ographs		Wetland Hydrology Ind Primary Indicators	s: ed				
_ _ 	Stream, Lak Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Inc Primary Indicators Inundal Saturat	s: ed ed in upper 12 inches				
_ _ 	Stream, Lak Aerial Photo	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Ind Primary Indicators Inundal Saturat	s: ed ed in upper 12 inches Marks				
_ _ 	Stream, Lak Aerial Photo Other (Expl	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I	s: ed ed in upper 12 inches Marks es				
No.F	Stream, Lak Aerial Photo Other (Expl Recorded Data A	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Inc Primary Indicators Inundal Saturat Water I Drift Lir	s: ed ed in upper 12 inches Marks les ent Deposits				
_ _ 	Stream, Lak Aerial Photo Other (Expl Recorded Data A	ke, or Tidal Gage ographs ain in Remarks)		Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime	s: ed ed in upper 12 inches Marks es ent Deposits ge Patterns in Wetlands				
No F	Stream, Lake Aerial Photo Other (Explanations Aerial Photo Other (Explanations Aerial Aeria Aerial Aerial A	ke, or Tidal Gage ographs ain in Remarks) Available	☼ inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat	ed ed in upper 12 inches Marks es ent Deposits ge Patterns in Wetlands ors (2 or more required):				
No F	Stream, Lak Aerial Photo Other (Expl Recorded Data A	ke, or Tidal Gage ographs ain in Remarks) Available	<u>O</u> inche	Wetland Hydrology Inc Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicators	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands cors (2 or more required): ed Root Channels in upper 12 inches				
No Feld Obse	Stream, Lake Aerial Photo Other (Explanations)  rvations:	ke, or Tidal Gage ographs ain in Remarks) Available er:		Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicators Sedime Coxidize Water-	ed ed in upper 12 inches Marks es ent Deposits ge Patterns in Wetlands fors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves				
No Feld Obse	Stream, Lake Aerial Photo Other (Explanations Aerial Photo Other (Explanations Aerial Aeria Aerial Aerial A	ke, or Tidal Gage ographs ain in Remarks) Available er:	inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-ts Local S	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands cors (2 or more required): ed Root Channels in upper 12 inches				
No Feld Obse	Stream, Lake Aerial Photo Other (Explanations)  rvations:	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:		Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-I Second S	ed ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): lid Root Channels in upper 12 inches Stained Leaves loil Survey Data				
No Feld Obse  Depth  Depth  Depth	Stream, Lake Aerial Photo Other (Explanemental Aerial Photo The Control of Surface Water in the Free Water in the Street Water	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-I Second S	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands eors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves eoil Survey Data eutral Test				
No Feld Obse	Stream, Lake Aerial Photo Other (Explanemental Aerial Photo The Control of Surface Water in the Free Water in the Street Water	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-I Second S	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands eors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves eoil Survey Data eutral Test				
No Feld Obse  Depth  Depth  Depth	Stream, Lake Aerial Photo Other (Explanemental Aerial Photo The Control of Surface Water in the Free Water in the Street Water	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-I Second S	ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): de Root Channels in upper 12 inches Stained Leaves loil Survey Data eutral Test				
No Feld Obse  Depth  Depth  Depth	Stream, Lake Aerial Photo Other (Explanemental Aerial Photo The Control of Surface Water in the Free Water in the Street Water	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-I Second S	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands eors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves eoil Survey Data eutral Test				
No Feld Obse  Depth  Depth  Depth	Stream, Lake Aerial Photo Other (Explanemental Aerial Photo The Control of Surface Water in the Free Water in the Street Water	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	No inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-ts Local S FAC-Ne	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands eors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves eoil Survey Data eutral Test				
No Feld Obse Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explanations:  of Surface Water in the Saturated Screen Saturated Saturated Screen Saturated Saturated Screen Saturated Satu	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	Va_inche	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-ts Local S FAC-Ne	ed ed in upper 12 inches Marks es es ent Deposits ge Patterns in Wetlands eors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves eoil Survey Data eutral Test				
No Feld Obse Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explanations:  of Surface Water in the Saturated Screen Sc	ke, or Tidal Gage ographs ain in Remarks) Available er:  n Pit:	wetlan	Wetland Hydrology Indicators Primary Indicators Inundat Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Coxidize The Coxidize	ed ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): lid Root Channels in upper 12 inches Stained Leaves loil Survey Data leutral Test Explain in Remarks)				
No Feld Obse Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explanations:  of Surface Water in to Saturated Soft Surface Water in the Saturated Soft Surface Water in	se, or Tidal Gage ographs ain in Remarks) Available er: n Pit: sent?	WETLAM  Yes No  Yes No	Wetland Hydrology Indicators Primary Indicators Inundal Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Water-ts Local S FAC-Ne	ed ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): lid Root Channels in upper 12 inches Stained Leaves loil Survey Data leutral Test Explain in Remarks)				
No Feld Obse Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explanations:  of Surface Water in the Saturated Screen Sc	se, or Tidal Gage ographs ain in Remarks) Available er: n Pit: sent?	wetlan	Wetland Hydrology Indicators Primary Indicators Inundat Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Coxidize The Coxidize	ed ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): lid Root Channels in upper 12 inches Stained Leaves loil Survey Data leutral Test Explain in Remarks)				
No Feld Obse Depth Depth Depth emarks:	Stream, Lake Aerial Photo Other (Explanations:  of Surface Water in to Saturated Soft Surface Water in the Saturated Soft Surface Water in	se, or Tidal Gage ographs ain in Remarks) Available er: n Pit: sent?	WETLAM  Yes No  Yes No	Wetland Hydrology Indicators Primary Indicators Inundat Saturat Water I Drift Lir Sedime Drainag Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Secondary Indicat Coxidize The Coxidize	ed ed in upper 12 inches Marks les ent Deposits ge Patterns in Wetlands lors (2 or more required): lid Root Channels in upper 12 inches Stained Leaves loil Survey Data leutral Test Explain in Remarks)				

Project/Site: ST MARIES RIVER Applicant/Owner: EMERALD CREEK GARNET Investigator: SIGNER ENVIRONMENTAL	(S)	Date: <u>6-7-9</u> 1998 County: <u>Bonessale</u> State: <u>TD</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

### **VEGETATION**

VEGETATION										
	Indicator	Areal	Cover	Cover Class						
Species	Status	Cover (%)	Class	Midpoint	Plank					
Herbs:										
Alopecorus pratonsis	FACW	50	٦	98.0	\					
				98.0	······································					
1344 1444 1444 1444 1444 1444 1444 1444				1						
		<del> </del>	<u> </u>							
			(							
		ļ								
		<u></u>	} 		**************************************					
		ļ								
Shrubs:		<u></u>								
					***************************************					
Saplings:										
Od human										
		<u> </u>		· · · · · · · · · · · · · · · · · · ·						
				***************************************						
		<del>                                     </del>								
Trees:		<u> </u>			ļ					
		-								
					<u></u>					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC:		(00)							
Remarks:										

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Map Unit Name (Series and Phase): CIARKIA SUT LOAM 0-2 lo Taxonomic Classification: Freesity mixed Social Agrantic Englacuate						Drainage Class: + + + + + + + + + + + + + + + + + +		
Taxonomic Classific	cation: the silly	Willey Fix		· ·	UT On	On Hydric Soils List? Yes		
				ile Description			····	
Depth Horiz	*************		e Color	Mottle Abundance		exture, Concretio		re, e
0-4	101 123	7		, , , , , , , , , , , , , , , , , , , ,		<u>silt (aan</u>		
4-6					·····	5+ Helons		
6-15	1048-2	· · · · · · · · · · · · · · · · · · ·	1R 4/4	<u>0 cco2</u>	· over		-tv	
15-18+	IOYR 5	// 72 y E	5/194/4	Many		Souly (	DQ.W.	
lydric Soil Indicato	ors:							
}	listosol			Concretions				
	listic Epipedon	•		High Organio	Content in Sui	rface Layer in Sand	dy Soils	
گر	Auffidic Odor			_	aking in Sandy			
<u></u>	quic Moisture Regim	e			cal Hydric Soils			
	leducing Conditions				tional Hydric So	oils List		
	Reyed or Low-Chrom	a Colors		Other (Explai	in in Remarks)			
Remarks:				<del> </del>				
		<u>-</u>					<u> </u>	
			НУІ	PROLOGY				
Danastad Da	t- (Describe in Berns	relan):		Motland Hy	drology Indigat	020.		
	ta (Describe in Rema am, Lake, or Tidal Ga			Wetland Hydrology Indicators: Primary Indicators:				
	am, Lake, or ribard. al Photographs	aye		Inundated				
<del>/</del>	ar (Explain in Remark	(e)			Saturated in upper 12 inches			
	d Data Available	.0,		Water Marks				
				_	Drift Lines			
					Sediment D	eposits		
Field Observations	:			Drainage Patterns in Wetlands				
1010 00001 10110	•			Second		(2 or more require		
Depth of Surfa	nce Water:	0-10	inches	Oxidized Root Channels in upper 12 inches				
			_		 Water-Stair	•	•	
Depth to Free	Water in Pit:	nlo	inches		Local Soil S	Survey Data		
,		[			FAC-Neutral Test			
Depth to Satu	rated Soil:	n/0	_ inches		Other (Expl	ain in Remarks)		
Remarks:			<u></u>	<u> </u>	<u> </u>			
·		·	<del>~</del>					
		WI	ETLAND	DETERMINAT	ION			
lydrophytic Vegeta	tion Present?	(Yes)	No		<del>- '</del>			
Hydric Soils Presen		(Y <u>e</u> e)	No	Is this Data	Plot within a we	tland?	(Yes)	N
Wetland Hydrology		Yes	No					
Rationale:								
	CRITERIA		~~~	_				
				1				

Project/Site: ST. MARIES RIVER Applicant/Owner: EMERGE CREEK GARRET CO Investigator: SELVER ENVIRONMENTAL	Date: 6-3-9 1998  County: Benevalor  State: = 5
Do Normal Circumstances exist on the sile?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No Yes No Yes No	Community ID:  Transesct ID:  Plot ID: Z

### **VEGETATION**

Species		Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
lerbs:						
Abserses statemens	*	PACIN	<b>4</b> 0	دا	34	1
Corev vesticaria	*	084	35	Ч	38	ı
Carex micophra			15	2_	10.5	
Grostic stabiliera	4	FACIN	35	4	38	1
Eleochais solutios			15	2	105	
the control of the first the control of the control						
					120	
Shrubs:						
				***************************************	***************************************	
		······································				
والمراوية والمواد والمقال المتاه المتاه المتاه المتاه المتاه المتاه والمتاه المتاه والمتاه وال				***************************************		
Saplings:					<u> </u>	
74 Pilly 3.		d has and had a self-time of the section of the sec		······································		
			<u> </u>		<del></del>	
				*********		
					<del> </del>	<del>-</del>
rees:				<del>}</del>		<del> </del>
				<u> </u>		
					AN   -   -   -   -   -   -   -   -   -	<u> </u>
				<del> </del>	····	<b>-</b>
				<del></del>		<b> </b>
			<u> </u>	<u></u>	1.55	<u> </u>
Percent of Dominant Species that are OBL, FACW, o	r FAC,	excluding FAC-:			100%	<del></del>
	<del></del>				<u></u>	
Remarks:						

Cover class midpoints: T<1% (none): 1 = 1.5% (3.0); 2 = 6.15% (10.5); 3 = 16.25% (20.5); 4 = 26.50% (38.0); 5 = 51.75% (63.0); 6 = 76.95% (85.5); 7 = 96.100% (98.0).

				Soil Pro	tile C	escription			_	
Depth	Horizon	Matrix Color	Mottle	Color	·3	e Abundance/Contrast	Texture, Concret	ions, Structure	э, е	
<u>گ-</u> 6		104 R 3 R					Siltlear	Υ		
6-7								s Ash		
7-15		1048 2/1	757	23/6		Occasinel	Stilt Loca			
15- D+		10/R 2/1		_			00/ 4/12	<u> </u>		
lydric Soil Ir	ndicators:		1		<u> </u>					
	Histosol					Concretions				
-	Histic Epip	edon				High Organic Content i	in Surface Laver in S	andy Soils		
-	Sulfidic Od					Organic Streaking in Sa				
-	· /	ture Regime				Listed on Local Hydric				
•	Beducing (					Listed on National Hyd	ric Soils List			
-		.ow-Chroma Colo	rs			Other (Explain in Rema				
Remarks:										
				НҮ	DRO	LOGY				
Recorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage Aerial Photographs  Other (Explain in Remarks)  No Recorded Data Available				Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in upper 12 inches Water Marks Drift Lines						
Field Observ	vations:					Sediment Deposits  Drainage Patterns in Wetlands  Secondary Indicators (2 or more required):				
Depth o	of Surface Water	: 0	-8	_ inches		Oxidized Root Channels in upper 12 inches  Water-Stained Leaves  Local Soil Survey Data  FAC-Neutral Test				
Depth I	to Free Water in I	Pit: <u>r</u>	10	_ inches						
Depth	to Saturated Soil	<u></u>	la	inches		Other (Explain in Remarks)				
Remarks:				· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	<u> </u>			
	- <u>-</u>		wı	ETLAND	DE3	ERMINATION		<u></u>		
Hydrophytic	Vegetation Prese	ent?	Yes	No						
Hydric Soils I	_	<del>-</del> -	Yes	No		Is this Data Plot within	a wetland?	Yes	N	
-	Irology Present?	•	Yes	No						
Rationale:	Du Cert		SATIS	SFIZD.						

A Company of the Comp

Project/Site: St. MARIES RIVER Applicant/Owner: Emergy Creek Garrier Co Investigator: Serkirk Environmental	Date: 6-7-9 1998  County: Benesah  State: ED
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: T -25

VEGETATION

	VEGETATIO	<del>, </del>			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
erbs:					
Alogourus products 7	FACW	55	5	63	*
Carex microplera			3	20.5	
Potentille aracilis		15	2_	10.5	
Agrostis stobnisera		20	3	20.5	
			· ·	124.5	
				12(0)	
			· Personal - pair transfer character for Last to	******************************	
			·····	<u> </u>	
nrubs:		1			<del> </del>
	<u> </u>				-
	<del> </del>	<u> </u>			
plings:					
10 married (10 Married 10 married					
ees:					<u> </u>
			<u> </u>		
		<u> </u>	177	<u></u>	<u> </u>
ercent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-:	·	100,	(0	<del></del>

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Project/Site: ST. MARIES RIVER Applicant/Owner: EVERPLD CREEK GARDET Investigator: SOLVIER ENVIRONMENTAL	Co	Date: <u>6-7-9 1998</u> County: <u>Rememble</u> State: <u>+5</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)?	Yes No Yes No Yes No	Community ID:

### **VEGETATION**

	VEGETATIO	<u> </u>			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
lerbs:					
Alopecurus protensis *	FACIN	40	4	38	1
Agrostis Stolonifera *	FACH	35	4	38	
Patentille aracilis		5	<u> </u>	3	
Bollis Direncis		10	2	ک ه ا	
Philon protesse	,	15	2	10.5	
Chysanthemin twonthemin *	UPL	35	4	38	
Browns Thermis		5		3	
Ac protensis		20	3	20.5	
				1	
Shrubs:				161-	
	<u></u>				
Saplings:				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Trees:					
				man na bankana nanga ankan na mini bisk i bisking papag pawa biski balaga	.,
		<u>]</u>	<u> </u>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-		<u>(</u>	,7%	

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

	Matrix Color 1048 3/2 1048 5/3	Mottle Color	Mottle Abundance/Contra	ast Texture, Concretions, Structure, etc. Sufferm				
	1048 3/2 1048 3/2:5/3	_	Mottle Abundance/Contri					
,	104R 3/2:5/3	_		SitLoan				
			<b>.</b>					
	NO 610	<b></b>		Sitt Loan = FineSoul				
	1048 5/3		-	Fre Sandy Loan				
1	reas and the histories of the species of the species of			`				
icators:		<u></u>						
Histosol		,	Concretions					
Histic Epiped	don 7	$\Rightarrow$	High Organic Conte	ent in Surface Layer in Sandy Soils				
	,	$\not\vdash$	Organic Streaking in	n Sandy Soils				
Aquic Moistu	rre Regime 🧳		Listed on Local Hyd	ric Soils List				
Reducing Co	inditions		Listed on National H	lydric Soils List				
Gleyed or Lo	w-Chroma Color	5	Other (Explain in Re	emarks)				
	700							
Stream, Lake, o Aerial Photogra Other (Explain i orded Data Avai	or Tidal Gage ophs in Remarks)	н	Wetland Hydrology Primary Indica Inui Sat Wa Drift Sec					
Surface Water:	·	o inches	Oxi	Oxidized Root Channels in upper 12 inches  Water-Stained Leaves				
Free Water in Pi	t: <u> </u>	inches	1	Local Soil Survey Data  FAC-Neutral Test				
Saturated Soil:	r	1 inches		ner (Explain in Remarks)				
		WETI AN	D DETERMINATION					
egetation Preser esent? blogy Present?	nt?	Yes No Yes No Yes No	Is this Data Plot wi	thin a wetland? Yes				
	Histic Epiped Sulfidic Odor Aquic Moistu Reducing Co Gleyed or Lo  d Data (Describe Stream, Lake, o Aerial Photogra Other (Explain i corded Data Avail tions:  Free Water in Pit Saturated Soil:	Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors  d Data (Describe in Remarks): Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) corded Data Available  tions: Surface Water: Free Water in Pit: Saturated Soil:	Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors  H  d Data (Describe in Remarks): Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) orded Data Available  tions: Surface Water: Free Water in Pit: Saturated Soil:  WETLAN egetation Present?  WETLAN	Histic Epipedon Sulfidic Odor Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors  HYDROLOGY  HYDROLOGY  Metland Hydrology Primary Indicates a final price of the colors of the colors  HYDROLOGY  Wetland Hydrology Primary Indicates a final price of the colors of th				

Project/Site: ST. MARIES RIVER Applicant/Owner: EMERALD CREEK GARDET CO Investigator: SELKIPK BONROMESTAL	Date: 6-7-9 1998  County: Bene-2019  State: TD
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)? Hay Law Yes No Is the area a potential Problem Area?  Yes No	Community ID: Transesct ID: Plot ID: T~27

### **VEGETATION**

·	Indicator	Areal	Cover	Cover Class	1
Spec <u>ies</u>	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					į.
Alopecoros pratensis *	FAGO	600)	7	98.0/	
TOP COLOR	1,000				
				<del>                                     </del>	
	*******************************			98,0	
1984, 1884 (1884)	***************************************				*************
	***************************************				
Shrubs:					
### ### ##############################					
Saplings:					
The state of the s					
			<u> </u>	·	
	***************************************				
	<u> </u>	<del> </del>		<del></del>	
Trees:	<u> </u>				
	***				
	<u> </u>		<del> </del>	<del></del>	
			ļ	<del></del>	
	<u> </u>		<u></u>	<u> </u>	L
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		1009	<u></u>	
	-		•		
Remarks:					
richia: No.					

Cover class midpoints: T<1% (none): 1 = 1.5% (3.0); 2 = 6.15% (10.5); 3 = 16.25% (20.5); 4 = 26.50% (38.0); 5 = 51.75% (63.0); 6 = 76.55% (85.5); 7 = 96.100% (98.0).

SOLES

		Phase): Clark			Drainage Class: Pool			
				undic Endoquelf	On Hydric Soils List? Yes No			
			1	file Description				
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast				
0-6		104R 3/2			Silt Loan			
6-7		104 B 3/2	7248 415	KAEE	Silt Loan			
7-17	7	104 E 5/3			Sandy Loan			
Hydric Soil	Indicators:							
	Histosol Histic Ep Sulfidic (		2	Concretions High Organic Content Organic Streaking in S Listed on Local Hydric	•			
	Reducing	•	/	Listed on National Hyd				
		or Low-Chroma Color	S	Other (Explain in Rema				
Remarks:	NEGATIO	ie for Hydi	RIC SOUS	- IDSIGNTFICANT	AMOUNT OF MOTTLING			
		- <u></u>	НҮ	DROLOGY				
	Recorded Data (Describe in Remarks): Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) No Recorded Data Available		Water Drift L	rs: ated ated in upper 12 inches Marks ines				
Field Obse	ervations:			Draina Secondary Indica	nent Deposits age Patterns in Wetlands ators (2 or more required):			
	h of Surface Wat		inches inches	Water	red Root Channels in upper 12 inches r-Stained Leaves			
•	h to Free Water i h to Saturated S		n/a inches	FAC-I	Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)			
Remarks:								
			<del> </del>					
			WETLAND	DETERMINATION				
Hydric Soil	ic Vegetation Present?		Yes No Yes No	Is this Data Plot within	n a welland? Yes No			
Welland H Rationale:	ydrology Presen	t?	Yes (No)					
		CRITERIA .	LACKING					

Project/Site: ST MARIES RIVER Applicant/Owner: EMERACO CREEK GARINET Investigator: SCHERK EDVIROR MENTAL	<u>Co</u>	Date: 6-7-9 (998  County: Renewalt  State: \$\Pi\)
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)?	Yes (No Yes (No Yes (No	Community ID: Transesct ID: Plot ID: T-28

VEGETATION								
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank			
Herbs:								
Elevinis poledris	4 081	45	<u></u>	38				
Acrestic stabilism	FACID	કેઈ	4	38				
Albrenios protensis		35	4	38				
Juncos so.		20	<u>3</u>	20.5	·			
Case winders		15	2	.10.5	********************			
Phologic arond macro		10	2	10.5				
				155.5				
Shrubs:					····			
	_		<u></u>		***************************************			
					······································			
Saplings:								
Trees:			<u></u>		<u></u>			
			<u> </u>		<u> </u>			
Percent of Dominant Species that are OBL, FACW, or FAC	C, excluding FAC-	·	<u> </u>	890	<del></del> -			
Remarks:					<del></del>			
· sorrianno.								

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 6=76-15%95% (85.5); 7 = 96-100% (98.0).

				SUILS					
		hase): <u>Clorking</u>		<del></del>	Drainage Class: _	Poor			
		resilla mired		astic Erhoasu	On Hydric Soils List	? Yes (No)			
		***************************************	Soil Pro	file Description	and a second control of the second control of the second control of the second control of the second control of				
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Co	ntrast Texture, Concret	ions, Structure, etc.			
0-4		10/R 2/1	_		silt Loo	-/~			
4-6		101/2 2/1,	724R 414	Occasio	ud silt loo	-W_			
6-10		IOUR 2/19/2	7/2424/4	Occasional	Silt bom	> FireSould too			
10-17+		10/R 4/2	71/2424/4	May	Fire	Solyloon			
				1	<u></u>	· · · · · · · · · · · · · · · · · · ·			
Hydric Soil I	ndicators:								
	Histosol			Concretions					
	Histic Epipe				ontent in Surface Layer in Sa	andy Soils			
	Sulfidic Od		÷	Organic Streaking	_				
٠		ture Regime		Listed on Local F	-				
	Reducing C				al Hydric Soils List				
	Gleyed or L	.ow-Chroma Color	5	Other (Explain in	Hemarks)				
D									
Remarks:									
	····								
			ну	DROLOGY					
		, <u>, , , , , , , , , , , , , , , , , , ,</u>				<del></del>			
Recor	ded Data (Descri	be in Remarks):		Wetland Hydrok	ogy Indicators:				
110001	,	or Tidal Gage			Primary Indicators:				
	Aerial Photog	_			Inundated				
	Other (Explain				Saturated in upper 12 inches				
No P	ecorded Data Av				Water Marks				
					Drift Lines				
				;	Sediment Deposits				
Field Obser	vations:				Drainage Patterns in Wetla	nds			
				1	Secondary Indicators (2 or more required):				
Depth	of Surface Water		⁻lÒ_inches	-	Oxidized Root Channels in upper 12 inches				
•			,	'	Water-Stained Leaves				
Depth	to Free Water in I	Pit: <u>y</u>	$\frac{1}{2}$ inches		Local Soil Survey Data				
,			l .		FAC-Neulral Test				
Depth	to Saturated Soil:	:	inches		Other (Explain in Remarks)				
				1		- <u></u>			
Remarks:					•				
			WETLAND	DETERMINATIO	NI .				
		-10		DETERMINATIO	<u>IX</u>				
	Vegetation Prese	ent? '	Yes No	1- 161- Dat - CI-1	willhim a supplier 40	(Ver) No			
Hydric Soils		(	Yes No	is this Data Plot	within a wetland?	Yes No			
	drology Present?		Yes No						
Rationale:									
	٨.	CRITERIA	CATC T	- N					
	PCC	LLITERIA	3K(12+1	( ZL) -					

Project/Site: ST. MARIES RIVER  Applicant/Owner: ENERAL CREEK GARDET CO Investigator: SELKIRK ENVIRONMENTAL	Date:
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)? Hay (Yes No Yes No	Community ID:

<u>VEGETATION</u>									
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank				
Herbs:									
Alopecoros pratensis *	PACW	661		98					
			# NETT	98					
			######################################						
		4n, brings-squares-successive and a successive and a succ	· · · · · · · · · · · · · · · · · · ·						
Shrubs:									
	·								
			***************						
Saplings:									
			P	***********************************	***************************************				
Trees:									
			`		***************************************				
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		100%	<u> </u>					
Remarks:	· <del></del> ·· <u></u> · -								

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (63.0); 6=76-15% (10.5); 6=76-15%95% (85.5); 7 = 96-100% (98.0).

SOUS

			ia Silt Loan	· · · · · · · · · · · · · · · · · · ·	Drainage Class:	9002			
Laxonomic C	lassification:	Pire Silly M	ixed Gicie Ac		On Hydric Soils List	? (Yes) No			
Oonth	Horizon	Matrix Color	Mottle Color	lile Description  Mottle Abundance/Contrast	Taylura Casarat	iona Chuatura ata			
Depth	HUIIZUII	(6)/2 2//		Fe.		ions, Structure, etc.			
0-6			7/2424/6	· <del>····································</del>	<del></del>	<del>an</del>			
6-16		167R 3/2	7/277 4/6	RAPE	Fore So	1			
16-18+		104 R 3 / 1	7'2YR 4/6	4202	FINE S	or con			
Hydric Soil I	ndicators:	-	<u> </u>						
	Histosol			Concretions					
,	Histic Er			High Organic Content in	n Surface Laver in Sa	ndv Soils			
•	Sulfidic			Organic Streaking in Sar		,			
,		loisture Regime		Listed on Local Hydric S	-				
•		ng Conditions		Listed on National Hydri					
	Gleyed	or Low-Chroma Col	ors	Other (Explain in Remar	ks)				
				· · · · · · · · · · · · · · · · · · ·					
			нү	DROLOGY					
	Stream, La Aerial Phot	lain in Remarks)		Primary Indicators Inundat Saturate Water M	Wetland Hydrology Indicators:  Primary Indicators:  Inundated  Saturated in upper 12 inches  Water Marks  Drift Lines  Sediment Deposits  Drainage Patterns in Wetlands  Secondary Indicators (2 or more required):  Water-Stained Leaves				
Field Obser	vations:			Drainag					
Depth	of Surface Wa	iter: <u>C</u>	>-¬¬ inches	Oxidize					
Depth	to Free Water	in Pit:	inches	Local S	Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)				
Depth	to Saturated S	Soil:	inches						
Remarks:					· · · · · · · · · · · · · · · · · · ·	<del></del>			
		·	<del></del> -						
·			WETLAND	DETERMINATION					
	Vegetation Pr	esent?	Yes No						
Hydric Soils			(Yes) No	Is this Data Plot within a	a wetland?	(Yes) No			
	drology Preser	nt?	(Yes) No	<u> </u>					
Rationale:						•			
	Au C	RITERIA S	BIZITA						
			•						

Project/Site: ST. MARIES RIVER Applicant/Owner: ENERALD CREEK GARDET CO. Investigator: SELECTE GRUNDEROLD INVESTIGATION	Date: 6-7-9 1998  County: Renewal  State: 40
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No Yes No	Community ID: Transesct ID: Plot ID:

VEGETATION

	VEGETATIO			<del>,                                      </del>	
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint_	Rank
<del></del>	Status	COTEL (70)	01033	miopoiii	- ram
Herbs:					
Alapares protensis +	FACW	799	7	98/	i
		an annual	AND AND ADDRESS OF THE PARTY OF		
	<u> </u>			1	
		**************************************	<u>,</u>	98	
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		***************************************
		<u></u>			
- Marit - M. C. Tara a strand Committee of Maritan and Annies of Committee of Commi					
		<b></b>		·	
		<u> </u>	<del> </del>		
Shrubs:	<u> </u>				
	<u> </u>				
		<u> </u>			
			}		
Canlings					
Saplings:	·	-			
THE REAL PROPERTY AND ADDRESS OF THE PROPERTY	•				
	<del> </del>	<del> </del>			
Trees:	<u> </u>				
		***************************************	1		
	<u> </u>				
			1		
Description of the state of the	Augustina FAC:	.1	100%	<u></u>	<u>'                                     </u>
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC.		<u>~~/~</u>		
	·····			<u> </u>	
Remarks:					
, , , , , , , , , , , , , , , , , , , ,					l
			46		

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Map Unit Na	ame (Series and	d Phase): Clark	in this pi	an 0-7%	Drainage Class: Pxxx					
Taxonomic	Classification:	For silly m	ised friend f		On Hydric Soils List? Yes No					
B 11	1.,	I Maria Cita	~~ <del>~</del> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	file Description	Tadus Consider Structure					
Depth	Horizon	Matrix Color	Mottle Color 71/2 4 / 5	Mottle Abundance/Contras	st Texture, Concretions, Structure, etc.					
0-8		101R 2/1	172112715	Rare	Silt Loan					
<u> </u>		1012 3/1			3111 00000					
				Property of the Property of th						
Hydric Soil	Indicators:									
	Histosol			Concretions						
	Histic Ep			High Organic Conten	it in Surface Layer in Sandy Soils					
	Sulfidic (	Odor		Organic Streaking in						
		loisture Regime		Listed on Local Hydri						
		ng Conditions		Listed on National Hy						
	Gleyed o	or Low-Chroma Cold	ors	Other (Explain in Ren	narks)					
Remarks:	<u> </u>	<del></del>								
			н	DROLOGY						
<u> </u>				DNOEDGT						
Reco	rded Data (Des	scribe in Remarks):		Wetland Hydrology	Indicators:					
	·	ke, or Tidal Gage			Primary Indicators:					
	Aerial Phot	tographs			Inundated					
/-		lain in Remarks)		<del></del>	rated in upper 12 inches					
No I	Recorded Data	Available			er Marks					
					Drift Lines					
Field Obse	nuctions:				ment Deposits nage Patterns in Wetlands					
rieio Obse	irvations.			1	Secondary Indicators (2 or more required):					
Depth	of Surface Wa	iter:	>- 4 inches		Oxidized Root Channels in upper 12 inches					
,				Wate	Water-Stained Leaves					
Depti	n to Free Water	in Pit:v	<u>∧∫o</u> inches		al Soil Survey Data					
					-Neutral Test					
Depti	n to Saturated S	Soil:	nches inches	Oine	er (Explain in Remarks)					
Remarks:										
				<del></del>						
			WETLAND	DETERMINATION						
Hydrophyli	c Vegetation Pr	resent?	Yes No							
Hydric Soil	s Present?		Yes No	Is this Data Plot with	nin a wetland? Yes No					
	ydrology Preser	nt?	(Yes) No							
Rationale:					•					
1	Du Coit	GRIA SATT	SFIED - F	W" EDGE YN"	PLOT.					
	1			<del>- 11-</del>						

Project/Site: ST MADIES RIVER  Applicant/Owner: EMERICA CREEK CARIST ( Investigator: SOLLIPK ENVIRONMENTAL	-TD	Date: _6-7-9 - (998   County:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

### **VEGETATION**

	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herhs:					
Festica pratensis *	FAC-	55	5	63	Y
Phlem pratouse		20	3	20.5	***************************************
Pollis perennis		10	2.	10.5	
Agnostis stansfera		25	ર_	20.5	
Chrysonthemm texautherum		6/	Ċ	10.5	
	·				
Moss		15		125	
Shrubs:					
Saplings:					
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		07.		
Damada		<u></u>			<del></del>
Remarks:					
	-				!

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

Map Unit Nan Taxonomic Cl	ne (Series and Prassification: Co	hase): Pokey	- Ty	orc Pro Sovans	ماهجات فاحدارة ه	er Limiy	8-4 (e) [4:	<u>6/17 v</u>	Drainage C On Hydric S		ਿਣਾ (Yes	- too- (No)
				Soil Pro			· · · · · · · · · · · · · · · · · · ·		1/02/1			
Depth 0 - 2 2 - 14 +	Horizon	Matrix Color 1012 3/2- 1012 4/2	Motil	e Color		Abunda	ance/Co	ontrast	Texture, C	Concretions  Coc. V.  Sca. J.	Structi	ure, etc.
	Histosol Histic Epipe Sulfidic Odd Aquic Mois Reducing C	or ture Regime	Ø	<u> </u>	( (	Organic : .isted or	ganic Co Streakir n Local I n Nation	ng in Sai Hydric S nal Hydri	n Surface Lay ndy Soils coils List ic Soils List ks)	rer in Sandy	Soils	
Remarks:												
				НҮ	/DROL	OGY	<u></u>					
Recorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) No Recorded Data Available  Field Observations:  Depth of Surface Water:  Depth to Free Water in Pit:  Depth to Saturated Soil:					Wetland Hydrology Indicators:  Primary Indicators:  Inundated Saturated in upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test Other (Explain in Remarks)						hes	
Remarks:												
			W	ETLAND	) DET	ERMIN	OITA	N		<del>_</del>		
Hydric Soils F	Vegetation Prese Present? rology Present?	,	Yes Yes Yes	3 3 20					wetland?		Yes	No
	Ace	CRITERIA	<b>&gt;</b> A	oe l	ACX	NSG	<b>-</b> .					

Project/Site: ST WARIES RUSCE Applicant/Owner: EMERGE (REEV GARAGE) WELLEN Investigator: SEXIEX ENVIRONMENTAL	<del></del>	Date: 6-7-9 1998 County: Bonewin State: Th
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID: 7-32

<u>VEGETATION</u>						
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank	
Herbs:						
Corex sp		<u> </u>	Ţ	3,0		
Festixa armanacea		15	2	10.5		
Agnostis Scabra		20	3	20.5		
Ab source profess *	PACW	35	4	38.0	(	
Oblem molenso.		15	2_	10.5		
Agrostis stolonibera	FAC	30	4	28.0		
tonces ez.		5	1	0.8		
					-	
				133-5		
Shrubs:						
`						
Saplings:						
					· ·	
Trees:						
Percent of Dominant Species that are OBL, FACW, or FAC	, excluding FAC-:		, lo	0070		
Remarks:					<u> </u>	
					· 	

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 5=51-75%95% (85.5); 7 = 96-100% (98.0).

SOUS

Map Unit Nar	ne (Series and	Phase): <u>Lokey -</u>	- 17 bic 1 1010	170ens	Drainage Class: SW			
axonomic C	lassification: Q	pareldun con		not Mixed Typic A	On Hydric Soils List?	Yes (No)		
	111	Matrix Calar	Mottle Color	Mottle Abundance/Contrast	Texture, Concretion	c Structure etc		
Depth	Horizon	Matrix Color						
0-7		10YR 2/2	76463/6	Common		* 1		
7-15+	***************************************	104E 4/2	7/2425/6	Common	the Sond	Loom		
	<del> </del>					engelster for the second group, and the second problems are suggested to		
	***************************************							
ydric Soil Ir	ndicators:	<u> </u>	- <del></del>	<u>.                                      </u>	· · · · · · · · · · · · · · · · · · ·			
	Histosol			Concretions				
-	Histosof Histic Epig	nedon		High Organic Content in	Surface Laver in Sand	v Soils		
_	Sulfidic O			Organic Streaking in Sai	•	,		
	Aquic Moi			Listed on Local Hydric S				
•	Reducing			Listed on National Hydri				
		Low-Chroma Colo	irs	Other (Explain in Remar				
			·					
Remarks:								
			<del></del>		<del></del>			
			пA	DROLOGY				
			111	DHOLOG1	<del></del>	<u> </u>		
Recar	ded Data (Deen	ribe in Remarks):		Wetland Hydrology Ind	icators:			
1160011		e, or Tidal Gage		Primary Indicators				
	_ Aerial Photo			Inundat				
		in in Remarks)		1	ed in upper 12 inches			
No Fr	ecorded Data A				Water Marks			
				Drift Lin	Drift Lines			
	<del> </del>			Sedime	nt Deposits			
ield Observ	vations:				e Patterns in Wetlands			
			-	Secondary Indicat	ors (2 or more required	l):		
Depth	of Surface Wate	er: <u> </u>	15 inches	Oxidize	d Root Channels in upp	er 12 inches		
			1		Stained Leaves			
Depth <sup>s</sup>	to Free Water i⊓	Pit:(	inches		oil Survey Data			
		_	1		eutral Test			
Depth	to Saturated So	il:	nches inches	Other (	Explain in Remarks)	•		
	<del></del>	<del></del>	·····					
Remarks:								
·								
			WETLAND	DETERMINATION				
- - - - - - - - - - - - - - - - - - -	Vegetation Pres	sent?	<del></del>	DETERMINATION				
-	Vegetation Pres	sent?	(Yes) No	Is this Data Plot within a	a welland?	(Yes) No		
lydric Soils	Present?		<del></del>		a wetland?	Yes No		
lydric Soils	-		Yes No		a welland?	Yes No		
lydric Soils Vetland Hyd	Present? frology Present?	?	Yes No Yes No Yes No	Is this Data Plot within a	a welland?	Yes No		
lydric Soils Vetland Hyd	Present? frology Present?	?	Yes No Yes No Yes No		a welland?	Yes No		

Project/Site: ST MARIES RUER Applicant/Owner: Ems RALD CREEK GARRET LTD	Date: 6-7-9 1998  County: Beneziah
Investigator:	State:
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No No No No No No No No No No No No No	Community ID:

	VEGETATIO	N			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:		`			
Orycanthemm (exanthemen		15	2_	10.5	·····
Landic stranser		35	學	S8.0	(
Festora rubra	FAC+	35	4	38,0	1
Rollis perennis		10	2	10.5	
Phleim praterise		15	2	10.5	an na ann an
Agraphian resers		2.2	3	20.5	
		· <u></u>	entigen gingginggivanis out of Est	128	and the state of t
		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
Shrubs:		······			
Saplings:					
Saprings.					
		***************************************			
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		<u> </u>	100%	
Parada.	<u> </u>			<u> </u>	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
Remarks:				•	
•					

Cover class midpoints: T < 1% (none): 1 = 1.5% (3.0); 2 = 6.15% (10.5); 3 = 16.25% (20.5); 4 = 26.50% (38.0); 5 = 51.75% (63.0); 6 = 76.5%95% (85.5); 7 = 96-100% (98.0).

			Soil Pro	file Description	yaquoll		
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contras	st Texture, Concretions, Structure, e		
0-8		104R B/2	_	_	SiltCoan		
8-15+	1	WR 3/2	1	Rome	Fre Sondy Coan		
and the same of the same of the same of	***************************************	1.00		The state of the s			
Ludria Cail	Indicators						
Hydric Soil	indicators:						
	Histoso			Concretions			
		pipedon		•	t in Surface Layer in Sandy Soils		
	Sulfidic			Organic Streaking in S	-		
		Moisture Regime ng Conditions		Listed on Local Hydrid			
		or Low-Chroma Cold	nrs	Other (Explain in Ren			
	0/6/60	S. LOW SHIOMB OOK		Carol (Explain in Fell	nation (		
Remarks:	Very to	or & margi	ral Trosic	where of Hari	ic conditions.		
	1,				<b>-</b>		
			110	DBOLOCY			
· —		<del>-</del>		DROLOGY			
Recoi	rded Data (De	scribe in Remarks):		Welland Hydrology I	Indicators;		
		ike, or Tidal Gage		Primary Indicate			
	Aerial Pho			Inunc			
/	Other (Exp	olain in Remarks)		Satur	rated in upper 12 inches		
No F	Recorded Data	Available			r Marks		
				—— orift i	Lines		
				,	ment Deposits		
Field Obser	rvations:				nage Patterns in Wetlands		
5 .44	-40 -4 - 114	<b>-1</b>	2 instance		cators (2 or more required):		
Бери	of Surface Wa	ater:	O inches		ized Root Channels in upper 12 inches er-Stained Leaves		
Denth	to Free Water	in Pit Y	inches		I Soil Survey Data		
r-ehai	WITE WATE	<u></u>	110 mones		Neutral Test		
Depth	to Saturated S	Boil:	n o inches	·	Other (Explain in Remarks)		
Remarks:	<del></del>		·	L			
					· · · · · · · · · · · · · · · · · · ·		
1 feeds 811 -	Manager 1		7	DETERMINATION			
	Vegetation Pr	[	Yes No	Je this Data Disturbit	in a walland?		
Hydric Soils Wetland Hy	Present? drology Preset	marginal .	Yes No	Is this Data Plot withi	in a welland? Yes (N		
Rationale:							
	6 CO.T	TOIR DOF	CA - TUES	c species			
~~	V	LATER LA LA PARTIE		53.16			
0r	c ro -	~ D . V . AV V	Derividor -	<i>∞10</i>			
000 000 000	E (217	ERIA MA	5011176 -	c species sous Hydrodory			

Project/Site: ST MADIES QUER Applicant/Owner: EMERALD CREEK GARDET Investigator: SOLVIER ENVIRONMENTER	470	Date: 6-7-9 (998  County: Bonewah  State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

### **VEGETATION**

VEGETATION					
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Species	Status	COVEL (78)	Class	Midpoint	Ralik
Herbs:	,-,,-				
Alopeurus protonors *	FACW	75	5	63	(
Phlem portensis *	FAC-	25	3	205	2-
Libetis Etalonilero		0)	2_	10.5	
					Chinal Colorador Language
				94	
1944 (https://processingle.com/state					
Shrubs:	-				
					<del></del>
			ļ		· · · · · · · · · · · · · · · · · · ·
Saplings:					
1,000,100,100,100,100,100,100,100,100,1					
		<del></del>			
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC,	evoluding EAC-		<u> </u>	<u> </u>	
reident of bonninant opedies that are Obt., Phow, of Pho,	EACIDARING 1 AC.			<u> </u>	
	<del> </del>	<del></del> _			
Remarks: Maginary Positive VE	ECETATIO	N			

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOUS

Map Unit Nai	me (Series and	Phase): Pokey -	Typic Flove	quends pro	-		
axonomic C	Classification:	was pum's		· · · · · · · · · · · · · · · · · · ·	On Hydric Soils List?	Yes (No)	
	<b></b>			<del></del>	1001		
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions		
0-2		10124/3			1 Silt Loan		
2-8		10YR 3/2	7/21R 4/6	FELD	SH Com	<b></b>	
<u>8 -12 </u>		10783/1			Silt Loan	<b>\</b>	
12-16+		104R 412			Fre Sondy	Loan	
ydric Soil I	ndicators:						
	_ Histosol			Concretions			
•	Histic Ep	ipedon		High Organic Content in	Surface Layer in Sandy	Soils	
	Sulfidic C			Organic Streaking in Sai	ndy Soils		
	Aquic Mo	oisture Regime		Listed on Local Hydric S	oils List		
	Reducing	g Conditions		Listed on National Hydri	c Soils List		
	Gleyed c	or Low-Chroma Colo	ors	Other (Explain in Remar	ks)		
emarks:							
			н	DROLOGY			
Recorded Data (Describe in Remarks):  Stream, Lake, or Tidal Gage Aerial Photographs Other (Explain in Remarks) No Recorded Data Available			Primary Indicators Inundat Saturate Water M	Wetland Hydrology Indicators:  Primary Indicators:  Inundated Saturated in upper 12 inches Water Marks Drift Lines			
ield Obser Depth	vations: of Surface Wat	ter: <u></u>	- \2_ inches	Secondary Indicat  Oxidize	nt Deposits pe Patterns in Wetlands ors (2 or more required) d Root Channels in uppo		
Depth	to Free Water i	in Pit: <u> </u>	inches		Stained Leaves oil Survey Data		
Depth	to Saturated S	oil: <u>v</u>	inches		eutral Test Explain in Remarks)		
Remarks:							
··- , ·			WETLAND	DETERMINATION			
indrophytic	Vegetation Pre	sent?		- DETERMINATION			
tydric Soils	=	50 <b>5</b> 1R :	Yes No	Is this Data Plot within a	a wetland?	(Yes) No	
•	rresent? drology Presen	<del>1</del> 2	Yes No	19 this Date Flot Within 6	4 WOUGHU!	140	
	nology Flesell	·:	110				
lationale:	A		~				
	Auc c	RITERIA A	er these	<u>⊅</u> ,			
-							

Project/Site: ST MARIES RIVER  Applicant/Owner: Ensemble CREEK GARRIET LTO  Investigator: SOLKIRK ENVIRONMENTAL		Date: 6-7-9 198  County: Bonewall  State:
Is the site significantly disturbed (Atypical Situation)?	(es No (es No (es No	Community ID:

### VEGETATION

	VEGETATION	<u> </u>			
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
lerbs:					
Festiva ribea		45	<u> </u>	38	
Phleum prodense *	THU	45	4	38	
Agroctic chambera	FAC	30	4	38	
Chrisanthenen leaconthemen		10	2	10.5	
Agrapyra repors		15	2	10.5	
				135	
Annual and the Company of the Compan					
Shrubs:					
`.					·
Saplings:			_		· · · · · · · · · · · · · · · · · · ·
apriligs.	<del></del>				
			<b></b>		
·					
rees:					
			<b></b>		
· · · · · · · · · · · · · · · · · · ·					
		<u> </u>			
			<del>                                     </del>		
		<u>.l</u>	L		
Percent of Dominant Species that are OBL, FACW, or FAC	c, excluding FAC-		6790		
Remarks:					

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

SOUS

pth 7 - 141 <sup>+</sup>	Horizon	Matrix Color	Mottle (	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		مومدال			
-7	Horizon	Matrix Color	1 DAOTHO (		Mattle Abrondance Poster	Taylura Caractian-	Ctatation -1-		
7 - 141		, ,	MOTHE	Joior	Mottle Abundance/Contrast	Texture, Concretions,			
7 - (41)		10483/2	_			SILT Loon	7		
- 1		WP 412			**************************************	robbly Fire S	wohro		
	***************************************								
dric Soil Inc	dicators:			1					
	Historal				Concretions				
	Histosol	inadan	,	-		n Surface Layer in Sandy	Soils		
	Histic Epi Sulfidic C		$\prec$		Organic Streaking in Sa		50113		
	· <del></del>			•	Listed on Local Hydric S	=			
	Aquic ivid Reducing	oisture Regime	/	,	Listed on National Hydro				
		y Conditions ir Low-Chroma Cold	nre		Other (Explain in Remai				
	cieyea o	EUW-CHIUHIA COR	113	•	Outer (Expendit in the tital	110/			
emarks:	·····								
mano.									
					<del></del>				
				17H	ROLOGY				
<del>i </del>	<del> </del>						<u> </u>		
Bocorde	ed Data (Desc	cribe in Remarks):			Wetland Hydrology Inc	dicators:			
necolde		ke, or Tidal Gage			Primary Indicators				
					Inunda				
	Aerial Photo	-			<del></del>	Saturated in upper 12 inches			
No Day		ain in Remarks)				Water Marks			
No Hed	corded Data A	Available			Drift Lin				
<del></del>	<del></del>				<b>─</b> ─ <b></b>				
						ent Deposits			
eld Observa	ations:				}	ge Patterns in Wetlands			
					l .	tors (2 or more required):			
Depth of	Surface Wat	er:		inches		ed Root Channels in uppe	r 12 inches		
			j			Stained Leaves			
Depth to	Free Water in	n Pit:	10	inches	1	Soil Survey Data			
			1			eutral Test			
Depth to	Saturated So	oil:	no	inches	Other	(Explain in Remarks)			
			<del>`</del>		<u> </u>				
emarks:									
<del></del>					<del></del>				
			WE	TIAND	DETERMINATION				
vdrophytic V	Aggetation Dro	seant?		No					
	egetation Pre	2011 !	(Yes)	<b>1</b> 80	Is this Data Plot within	a wetland?	Yes (No		
ydric Soils P		10		<u> </u>	is uns Data Fibt Within	a Menaim :	100 (110		
	ology Present	i f	Yes (	No)					
OTIONOLO:									
ationale:									

Project/Site: ST MODIES RIVER Applicant/Owner: EMERALD CREK GARNET CTD Investigator: SEIXIEK ENVIRONMENTER		Date:6-7-9
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community (D:

Saplings:  Trees:		VEGETATION						
Herbs:  Cotex resigna ("Terthiodris") * OBU 75 5 63  Hopeans prodonsis * PACW 30 4 38  Chapter sp 10 2 10.5  Compasia asamash 5 1 3  Agrostis stidenisera 15 2 10.5  Shrubs:  Saplings:	Rank	: ;		• • • • • • • • • • • • • • • • • • • •		Species		
Corex vericeria ("lenticoloris") * 080 75 5 63  Alopeorus protonsis * PACW 30 4 38  Chrena sp 10 2 10.5  Camossia gramash 5 1 3  Agrostis stabnisera 15 2 10.5  Shrubs:  Saplings:						erbs:		
Aloperus pratonsis  Chycena Sp Camoscia gramash  Agrostis stellarisera  Shrubs:  Saplings:  Trees:	(	63	5	75	08U)	'crex resicoria (? lexticoloris) *		
Shrips:  Saplings:	2_	38	4	కెర్డి		Hopecurus pratonsis *		
Campsia gramesh Agrostis stationisera  Shrubs:  Saplings:		10-5	2	10		lucera so		
Shrubs:  Saplings:		3	Į			anneia gramash		
Shrubs:  Saplings:  Trees:		105	2	<u>اچا</u>		grostis stolonisera		
Shrubs:  Saplings:  Trees:								
Saplings:  Trees:		125						
Saplings:  Trees:								
Saplings:  Trees:								
Trees:						ırubs:		
Trees:								
Trees:								
Trees:								
Trees:								
Trees:						pplinas:		
						988.		
Percent of Dominant Species that are OBL_FACW or FAC_excluding FAC:	·				······································			
Percent of Dominant Species that are OBL_FACW or FAC_excluding FAC:								
Percent of Dominant Species that are OBL_FACW or FAC_excluding FAC:			****************		**************************************			
Percent of Dominant Species that are OBL_EACW or EAC_excluding EAC-: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1							
Percent of Dominant Species that are OBL_FACW or FAC_excluding FAC-	1		<del></del>					
Teloent of Borninaire opeoles that are obe, 111611, of 1116, shoulding 1116.		5%	10		excluding FAC-:	ercent of Dominant Species that are OBL, FACW, or FAC,		
Remarks:	<u></u>					emarks:		

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-15% (10.5); 6=76-15% (10.5); 1=1-5%95% (85.5); 7 = 96-100% (98.0).

			Soil Pro	ofile Description 🗀 🤇	lyaquil
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Cont	rast Texture, Concretions, Structure, etc.
0-7		104R 2/2			silt Loan
Z -8		1018 3/2	724R 4/6	Common	Siltloan
8-16+		10x R 4/2	724R 4/4	Common	,
Hydric Soil	Indicators:				
	Histosol			Concretions	
	Histic Epip				tent in Surface Layer in Sandy Soils
	Sulfidic Oc			Organic Streaking	
		sture Regime		Listed on Local Hy	
	Reducing			Listed on National	<del>-</del>
	Gleyed or	Low-Chroma Colo	ors	Other (Explain in R	emarks)
Remarks:					
			Н	DROLOGY	
Recoi	rded Data (Descr	ribe in Remarks):		Wetland Hydrolog	gy Indicators:
	Stream, Lake Aerial Photog	e, or Tidal Gage graphs in in Remarks)		Primary Indic	
No F	Stream, Lake Aerial Photog Other (Explai Recorded Data Av	e, or Tidal Gage graphs in in Remarks)		Primary Indic	cators: undated aturated in upper 12 inches ater Marks ift Lines ediment Deposits ainage Patterns in Wetlands
No F	Stream, Lake Aerial Photog Other (Explai Recorded Data Av	e, or Tidal Gage graphs in in Remarks) vailable	<u>- 3∂</u> inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks ift Lines ediment Deposits ainage Patterns in Wetlands indicators (2 or more required): xidized Root Channels in upper 12 inches
No Field Obser	Stream, Lake Aerial Photog Other (Explained Data Andrews)  Twattons:	e, or Tidal Gage graphs in in Remarks) vailable	- 30 inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands adicators (2 or more required): exidized Root Channels in upper 12 inches fater-Stained Leaves acal Soif Survey Data
No Field Obser  Depth  Depth	Stream, Lake Aerial Photog Other (Explainecorded Data Average)  vations:	e, or Tidal Gage graphs in In Remarks) vailable	1	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands indicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves
No Field Obser  Depth  Depth	Stream, Lake Aerial Photog Other (Explainecorded Data Avaitable) vations: of Surface Water in	e, or Tidal Gage graphs in In Remarks) vailable	inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands indicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves local Soil Survey Data AC-Neutral Test
No Field Obser  Depth  Depth  Depth	Stream, Lake Aerial Photog Other (Explainecorded Data Avaitable) vations: of Surface Water in	e, or Tidal Gage graphs in In Remarks) vailable	inches inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands adicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves acal Soil Survey Data AC-Neutral Test ther (Explain in Remarks)
No Field Obser  Depth  Depth  Depth  Remarks:	Stream, Lake Aerial Photog Other (Explainecorded Data Avaitions: of Surface Water in to Free Water in	e, or Tidal Gage graphs in in Remarks) vailable er: Pit:	inches inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands adicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves acal Soil Survey Data AC-Neutral Test ther (Explain in Remarks)
No F Field Obser Depth Depth Depth Remarks:	Stream, Lake Aerial Photog Other (Explainecorded Data Avaitions: of Surface Water in to Free Water in to Saturated Soi	e, or Tidal Gage graphs in in Remarks) vailable er: Pit:	wetland	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands indicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves iocal Soil Survey Data AC-Neutral Test ther (Explain in Remarks)
No F Field Obser Depth Depth Remarks:	Stream, Lake Aerial Photog Other (Explainecorded Data Avaitions: of Surface Water in to Free Water in to Saturated Soi	e, or Tidal Gage graphs in in Remarks) vailable er:	inches inches	Primary Indic	cators: undated aturated in upper 12 inches ater Marks iff Lines ediment Deposits ainage Patterns in Wetlands indicators (2 or more required): xidized Root Channels in upper 12 inches fater-Stained Leaves incal Soil Survey Data AC-Neutral Test ther (Explain in Remarks)

Project/Site: ST MARIES RIVER Applicant/Owner: EMERAD CREEK GARRET LETD Investigator: SCIKIRK CHURCHIMOREA		Date: 6-7-9 1998  County: Kenescal  State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes Vo	Community ID: Transesct ID: Plot ID: 7-38

VEGETATION								
		Indicator	Areal	Cover	Cover Class			
Species		Status	Cover (%)	Class	Midpoint	Rank		
Herbs:		······································				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
Festica rubra	*	FAC+	60	5	73	(		
Crev vesicaia			7					
Achillea millefdium			20	3	20.5			
Agrostis stolonitera	X	FAC	35	4	38	2_		
Camassia quanash			5	1	3			
and the second s								
		······································			139-5			
			***************************************					
Shrubs:				-		······		
OIII 000.								
		· · · · · · · · · · · · · · · · · · ·						
0 15-		····						
Saplings:		***************************************			***			
						······		
Trees:				<u></u>				
					· · · · · · · · · · · · · · · · · · ·			
				<u></u>	<u> </u>			
Percent of Dominant Species that are OBL, FACW, o	r FAC,	excluding FAC-:		100	, 7.			
	·	•						
Remarks:								

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-15%95% (85.5); 7 = 96-100% (98.0).

Map Unit Na Taxonomic	me (Series and Classification:	i Phase): Yokey -	Typic Flour	عص ه الحوالم	10 mi red 1/20	Drainage Class: On Hydric Soils L	151? (Yes	
					escription	Cryoq 2011		<u> </u>
Depth 0-4 4-16 <sup>+</sup>	Horizon	Matrix Color 1018 3 3 1018 3 7	Mottle Color 7578 4/6 1678 4/4		Abundance/Contra Few Few	Foes	elions, Struct	
Lludrio Coil	Indicators							
Hydric Soil	Histosol Histic Ep Sulfidic ( Aquic M	oipedon	pre		Concretions High Organic Conte Organic Streaking ir Listed on Local Hydi Listed on National H Other (Explain in Re	ric Soils List Hydric Soils List	Sandy Soils	
Remarks:							·	
			нү	/DROI	OGY			
- - -	Stream, La Aerial Phot	lain in Remarks)			Sati	itors: ndated urated in upper 12 incl ter Marks t Lines	hes	
Field Obse	vations: of Surface Wa	ıter:	inches	·	Dra Secondary Inc	diment Deposits inage Patterns in Wetl dicators (2 or more req dized Root Channels i	(uired):	ches
	to Free Water		n ( inches		LocFA(	ter-Stained Leaves al Soil Survey Data C-Neutral Test	-1	
Depth Remarks:	to Saturated S		n ( inches		O(n	er (Explain in Remark	s, _ <del></del>	
			WETLAND	) DET	ERMINATION			
Hydric Soils Wetland Hy	: Vegetation Pr : Present? drology Preser		Yes No Yes No Yes No		Is this Data Plot wit	hin a wetland?	Yes	No
Rationale:	Bat	CRITERIA	394 L	PCK1	7C.			

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERALD CREEK GARNET  Investigator: SCLIEK ENVIRONMENTA	<u> </u>	Date: 6-7-9 1998  County: Renexat  State: TO
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

	VEGETATIO	<u> </u>			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Corax vesicorice x	OEC	60	7	93/	
Romex Crispus				193	
Shrubs:					
Certaens dantasii *	FAC	30	4	38	(
Alnos incana *	FACW	ಬ	3	20:5	2
				58-5	
Saplings:					
Trees:					
Percent of Dominant Species that are OBL, FACW, or FAC	excluding FAC-		\(	50 <sub>10</sub>	
Remarks:					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

			ver Sondy 3	skipful mixed Traica	On Hydric Soils List? (Yes) No
>17		1	Soil P	rofile Description	tyaquoll
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-5		10483/1	7/2424/6	Many	loan
5-16+		104R 4/1		<u> </u>	Very gravely sorby Loa
lydric Soil	Indicators:				
	Histosol			Concretions	
	Histic Epi				Surface Layer in Sandy Soils
	Sulfidic O			Organic Streaking in Sa	•
		sture Regime		Listed on Local Hydric S	
	Reducing	Low-Chroma Colo		Listed on National Hydri Dther (Explain in Bernar	
	Gleyed bi	EOW-Chioma Cox	ırs	Other (Explain in hemai	K5)
Remarks:					
כאומווטר.					
			н	YDROLOGY	
-					
Reco	rded Data (Desc	ribe in Remarks):		Wetland Hydrology Inc	licators:
	•	e, or Tidal Gage		Primary Indicators	
_	Aerial Photo			Inundat	ed
/-	Other (Expla	in in Remarks)		Saturate	ed in upper 12 inches
No f	Recorded Data A	vailable		Water M	<i>M</i> arks
				Drift Lin	es
<del></del>				Sedime	nt Deposits
-ield Obse	rvations:			Drainag	e Patterns in Wetlands
Field Obse	rvations:			Drainag Secondary Indicat	ge Patterns in Wetlands ors (2 or more required):
	rvations:	er:	ı – \2_ inches	Drainas Secondary Indicat Oxidize	ge Patterns in Wetlands ors (2 or more required): od Root Channels in upper 12 inches
-	of Surface Wate		_	Drainag Secondary Indicat Coxidize Water-	ge Patterns in Wetlands ors (2 or more required): ed Root Channels in upper 12 inches Stained Leaves
Depth			inches	Drainas Secondary Indicat Coxidize Water- Local S	ge Patterns in Wetlands ors (2 or more required): od Root Channels in upper 12 inches Stained Leaves oil Survey Data
Depth Depth	of Surface Water in	Pit:	o inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth	of Surface Wate	Pit:	_	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands ors (2 or more required): od Root Channels in upper 12 inches Stained Leaves oil Survey Data
Depth Depth Depth	of Surface Water in	Pit:	o inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Depth	of Surface Water in	Pit:	o inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Depth	of Surface Water in	Pit:	o inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Depth	of Surface Water in	Pit:	o inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Depth	of Surface Water in	Pit:	inches inches	Drainas Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Depth Remarks:	n of Surface Water in n to Free Water in n to Saturated So	Pit:	inches inches	Drainas Secondary Indicat Oxidize Water- Local S	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test
Depth Depth Remarks:	n of Surface Water in n to Free Water in n to Saturated So	Pit:	inches inches  WETLAN	Drainas Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test Explain in Remarks)
Depth Depth Remarks: Hydrophytic	n of Surface Water in to Free Water in to Saturated So	Pit:	inches inches  WETLAN  Wes No	Drainas Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands fors (2 or more required): and Root Channels in upper 12 inches Stained Leaves soil Survey Data seutral Test Explain in Remarks)
Depth Depth Depth Remarks: Hydrophytic Hydric Soils Wetland Hy	n of Surface Water in n to Free Water in n to Saturated So	Pit:	inches inches  WETLAN	Drainas Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test Explain in Remarks)
Depth Depth Remarks:	to Free Water in to Free Water in to Saturated So c Vegetation Pres	Pit:	wetlan  Wes No  Wes No	Secondary Indicat Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test Explain in Remarks)
Depth Depth Remarks: Hydrophytic Hydric Soils Wetland Hy	to Free Water in to Free Water in to Saturated So c Vegetation Pres	Pit:	wetlan  Wes No  Wes No	Drainas Secondary Indicat Oxidize Water- Local S FAC-Ne Other (	ge Patterns in Wetlands cors (2 or more required): de Root Channels in upper 12 inches Stained Leaves doil Survey Data eutral Test Explain in Remarks)

Project/Site: ST MARIES RIVER Applicant/Owner: Emerald Creek Garnet Ltd Investigator: SELKIEK ENVIRONMENTAL	Date:       6-7-9       1998         County:       Banewah         State:       ID
Do Normal Circumstances exist on the site?  Is the site significantly disturbed (Atypical Situation)?  Is the area a potential Problem Area?  Yes No	Community ID:

### **VEGETATION**

	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					
Festiva plora *	FACT	85	7	93	
Corex vesicoria		10	2	10-5	
5000000 59					
Chrysanthemin lewanthemin		て			
Bollis parennis		(0	2	105	
				114	
		***************************************			
Shrubs:					
`					
			( <u> </u>		
Saplings:		<del> </del>			
Sapiniga.					
	***************************************				
Trees:					
		ļ			
		<u> </u>	*		
		1	<u></u>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		1009	<del>)</del> _	
		·			
Remarks:					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0);  $6 \approx 76-95\%$  (85.5); 7 = 96-100% (98.0).

Map Unit Nan	ne (Series and	Phase): <u>Pakey -</u>	Typic Flow	aquents 0-4% to mixed Typic A	Drainage Class: <u>SW</u> On Hydric Soils List?	Yes No
raxonomic C	iassilication; (	TOLA JASAM D		file Description Cryos		Tes (NO)
Depth 0-4 4-17+	Horizon	Matrix Color 10\ 2 3/3 10\ 2 3/2	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions	, Structure, etc.
Hydric Soil Ir	ndicators:			Concretions		
-	Reducing	•	irs	High Organic Content II Organic Streaking in Sa Listed on Local Hydric S Listed on National Hydr Other (Explain in Remai	Soils List ric Soils List	Soils
Remarks:						
			НА	DROLOGY		
	_ Stream, Lal _ Aerial Photo	ain in Remarks)		Water I	s: ted ted in upper 12 inches Marks nes	
Field Observ	rations: of Surface Wal	dor:	inches	Draina Secondary Indica	ent Deposits ge Patterns in Wetlands tors (2 or more required) ed Root Channels in upp	
	o Free Water		nches inches	Water-	Stained Leaves Soil Survey Data eutral Test	
Depth	o Saturated S	oil:	h o inches		(Explain in Remarks)	* .
Remarks:			WETLAND	DETERMINATION		
Hydric Soils	Vegetation Pre Present? rology Presen		Yes No Yes No	Is this Data Plot within	a welland?	Yes No
	Cup C	RITERIA	per la	CKING.		

Project/Site: ST MARIES RIVER Applicant/Owner: EMERALD CREEK GARNET Investigator: SELKIRK ENVIRONMENTAL	UP_	Date: <u>6-7-9</u> 1998  County: <u>Benevah</u> State: <u>+D</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

**VEGETATION** 

VEGETATION							
•	Indicator	Areal	Cover Class	Cover Class	Donk		
Species	Status	Cover (%)	CIBSS	Midpoint	Rank		
Herbs:					······		
Carex vesicaria *		70	5	63.0			
Aborcorus pratensis *	FACW	35	<u>-</u> [	38	2		
3				10 t	************		
				() ()			
1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s 1 mm s							
	<u></u>			**************************************			
Shrubs:					······		
311 008.			<b></b>				
	<u> </u>			n,, , martin and an exercise match remarks	***************************************		
	<u> </u>		<b> </b>				
			<u> </u>				
Saplings:	<u> </u>						
				<u> </u>			
Trees:							
The state of the s							
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:			00%			
Remarks:							

Cover class midpoints: T<1% (none): 1=1-5% (3.0); 2=6-15% (10.5); 3=16-25% (20.5); 4=26-50% (38.0); 5=51-75% (63.0); 6=76-95% (85.5); 7=96-100% (98.0).

	Classification: 🥆	COLRED / LOTAN = CM	61-70mm 25	detal mixed Typica	On Hydric Soils List? (Yes ) 🖡				
				file Description	Jione				
)epth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, e				
0-6		104R 2/2 -	7/124R 4/6	Few	SiltLoan				
6-17+			7/242 4/6	Common	Fire Sondy Loan				
					1				
Hydric Soil I	ndicators:								
				<b>2</b>					
•	Histosol			Concretions	Confess I mass in Dunda Poils				
,	Histic Epi	•		<del>_</del>	Surface Layer in Sandy Soils				
	Sulfidic O			Organic Streaking in Sar Listed on Local Hydric S	=				
	Aguic Mo	isture Regime		Listed on National Hydri					
		r Low-Chroma Colors		Other (Explain in Remark					
	Gieyed O	LOW-Childria Colors		Other (Explain in Figure	73)				
Remarks:		<del></del>							
<b></b>			ů.						
				<u> </u>					
			•						
			н	DROLOGY					
Recor	•	ribe in Remarks):		Wetland Hydrology Ind					
		e, or Tidal Gage			Primary Indicators:				
<del></del>	Aerial Photographs				Inundated				
/		ain in Remarks)		· · · · · · · · · · · · · · · · · · ·	Saturated in upper 12 inches  Water Marks				
_ <u>✓</u> № P	lecorded Data A	vailable							
				Drift Lin					
				· · · · · · · · · · · · · · · · · · ·	nt Deposits				
Field Obser	vations:		-	] =	e Patterns in Wetlands				
		^			ors (2 or more required):				
Depth	of Surface Water	ar:	-6 inches	<del></del>	d Root Channels in upper 12 inches				
					Stained Leaves				
Depth	to Free Water in	Pit: <u> </u>	<u></u> inches	1	Local Soil Survey Data				
			1		FAC-Neutral Test				
Depth	to Saturated So	di: <u> </u>	o inches	Other (I	Explain in Remarks)				
Remarks:	<del></del>								
nendiks.		•							
	<u> </u>								
			WETLAND	DETERMINATION					
<del></del>									
Hydrophytic	Vegetation Pre	sent?	res No		_				
	Vegetation Pres	sent?	(es) No (es) No	Is this Data Plot within a	a wetland? (Yes)				
Hydric Soils	Present?		<del>-</del>	Is this Data Plot within a	wetland? Yes N				
Hydric Soils	-		(ES) No	Is this Data Plot within a	a wetland? Yes				
Hydric Soils Wetland Hyd Rationale:	Present? drology Present	7	(es) No (es) No		a wetland? Yes N				
Hydric Soils Wetland Hyd Rationale:	Present? drology Present		(es) No (es) No		a wetland? Yes N				

Project/Site: ST MARIES RIVER  Applicant/Owner: EMERAD CORRY GARNET CTO  Investigator: SEXIR ENVIRONMENTAL	Date: 6-7-9 1998  County: Benevah  State: \$\D
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?  Yes No Yes No	Community ID:  Transesct ID:  Plot ID:

VEGETATION

	VEGLIAIN	717		<del>,                                     </del>	
	Indicator	Areal	Cover	Cover Class	
Species	Status	Cover (%)	Class	Midpoint	Rank
Herbs:					
Corex vesticaia x	OBC	65	5	63	(
Alopecurus pradensis *		30	4	3-8	2_
Phlem pratersis		18	2_	10.5	
Phaloris arndmacea	***************************************	10	2_	10.5	***************************************
1100					
				132	
	<u> </u>				·····
			***************************************		*************
Shrubs:		<u> </u>			<del></del>
	1				
	<u> </u>				
					······································
					***************************************
Saplings:					
oapings.	1				
Trees:		<del>                                     </del>			<u> </u>
11663.					
			······································		
Teacher(), 1944-1944-1944-1944-1944-1944-1944-1944					
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding EAC-		<del>1</del>	<u> </u>	
Felicent of Dominant opecies that are ODE, FACA, OF FAC,	enduding 1 AC.			<del></del>	
Remarks:					·
Tienaiks.					
<u></u>					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

SOILS 0-4% Drainage Class: SW Fooe Map Unit Name (Series and Phase): Tokey -Typic Flovesoers Taxonomic Classification: Cons Iranu Ever Sonde selad mixed NON On Hydric Soils List? Soil Profile Description Cryagooll Texture, Concretions, Structure, etc. Horizon Matrix Color Mottle Color Mottle Abundance/Contrast Depth 104R 3/3 0-3 3-4 104E 6/2 4-16+ 1042412 Hydric Soil Indicators: \_\_\_\_ Concretions \_ Histosof High Organic Content in Surface Layer in Sandy Soils .... Histic Epipedon Sulfidic Odor Organic Streaking in Sandy Soils Listed on Local Hydric Soils List Aquic Moisture Regime Listed on National Hydric Soils List Gleyed or Low-Chroma Colors \_\_\_\_ Other (Explain in Remarks) Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Recorded Data (Describe in Remarks): **Primary Indicators:** Stream, Lake, or Tidal Gage Inundated Aerial Photographs Saturated in upper 12 inches Other (Explain in Remarks) No Recorded Data Available Water Marks Drift Lines \_\_ Sediment Deposits Drainage Patterns in Wetlands Field Observations: Secondary Indicators (2 or more required): Oxidized Root Channels in upper 12 inches Depth of Surface Water: inches \_ Water-Stained Leaves Local Soil Survey Data Depth to Free Water in Pit: \_\_\_\_ FAC-Neutral Test Depth to Saturated Soil: \_\_\_ Other (Explain in Remarks) Remarks: WETLAND DETERMINATION

WETLAND DETERMINATION

Hydrophytic Vegetation Present?

Hydrophytic Vegetation Present?

Wes No

Hydroc Soils Present?

Yes No

Wetland Hydrology Present?

Yes No

Rationale:

ALL CRITERIA ARE SATISFIED

# DATA FORM WETLAND DETERMINATION

Project/Site: ST MARES RIVER  Applicant/Owner: EMERALD CREEK RARDET LTD  Investigator: SELKIRK ENVIROND MEMTAL		Date: 6-7-9 1998  County: Beneval  State:
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID:

### **VEGETATION**

		VEGETATIO	) N			
Species		Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
erbs:		Status	Cover (76)	Class	imaponit	Hallk
Circium arvense		······································	15	2	10.5	
Protoris asmáracea	X	FACW	45	Ų	38	(
Langetis stanisera	24	FAC	25	_3	20.≤	2
Resterce protensis			10	2	10.5	
Testace processing				<u> </u>		
		***************************************		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-A.5	
					, , , , , , , , , , , , , , , , , , ,	w*************************************
Shrubs:						
Cratagus dandesii		······································	72			
Saplings:						
			<del></del>		***************************************	<u> </u>
rees:	$- \neg$					
Populus palsanifera	X	FAC	35	4	38/	1
10,000				<u> </u>	/28	
					1 50	
		·····				
Percent of Dominant Species that are OBL, FACW, or	FAC: 6	excluding FAC-		(08	- <del></del>	<u> </u>
Growth 2. Communication and Garage (1994) of				7	<del>-,</del>	
Remarks:				<del></del>		
tonano.						

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-95% (85.5); 7 = 96-100% (98.0).

To determine the dominant species, first rank the species by the midpoints of their cover classes. Then, cumulatively sum the midpoints of the ranked species until 50% of the total for all species' midpoints (for each layer) is immediately exceeded. All species contributing to that cumulative total plus any additional species having 20% of the total midpoint value should be considered dominants, and marked with an asterisk.

SOILS

		d Phase): Roxey		cappends 0-4%					
Taxonomic	Classification.	CO SE CONTRO			Try and Solis Elst? (Jes) 40				
Depth	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.				
0-2		1012312			Sonoy loan				
2-6		10/23/3	_		Souly Loan				
6-18+		10423/1	7'54R 4/6	Few	Loany Sand				
Hydric Soil	Indicators:								
	Histoso	l		Concretions					
	Histic E	pipedon		High Organic Content in	n Surface Layer in Sandy Soils				
	Sulfidic	· ·		Organic Streaking in Sa	indy Soils				
	Aguic N	loisture Regime		Listed on Local Hydric S	Soils List				
	Reducir	ng Conditions		Listed on National Hydr	ric Soils List				
	Gleyed	or Low-Chroma Colo	ors	Other (Explain in Remar	rks)				
Remarks:									
			нү	DROLOGY					
	Stream, La Aerial Pho	olain in Remarks)		Wetland Hydrology Ind Primary Indicators Inundat Saturat Water N	s: ted ted in upper 12 inches Marks				
Field Obse	rvations:			Drainag	ent Deposits ge Patterns in Wetlands				
Dank		_a	\ _ (	1	tors (2 or more required):				
Depir	of Surface Wa	iler.	inches		ed Root Channels in upper 12 inches				
Denth	to Free Water	in Pit Y	inches		Water-Stained Leaves Local Soil Survey Data FAC-Neutral Test				
Берп	rio i iec vialei		inches	I					
Depth to Saturated Soil: inches Other (Explain in Remarks)									
Remarks:	· · · · · · · · · · · · · · · · · · ·								
<u> </u>									
			WETLAND	DETERMINATION					
Hydrophytic	c Vegetation P	resent?	Yes No						
Hydric Soils	_		Yes No	Is this Data Plot within	a wetland? Yes No				
	drology Prese	nt?	(Yes) No						
Rationale:									
14	LL CRI	teria ar	E SATIS	SFICO.					

## DATA FORM WETLAND DETERMINATION

Project/Site: ST MARIES RIVER  Applicant/Owner: EVARABLE CREEK GARDET C  Investigator: SEXIR FULL ROWNERS	T)	Date: 6-7-9 1998  County: Beneval  State: ID
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area?	Yes No Yes No Yes No	Community ID: Transesct ID: Plot ID:

	VEGETATIO	<u> </u>			
Species	Indicator Status	Areal Cover (%)	Cover Class	Cover Class Midpoint	Rank
Herbs:					
Platago loncedata		.25	3	20.5	······································
Achillea millesdim		40	Ч	38	
Chromthemm lesconthemm		35	4	38	
Festiva Nora *	FACT	65	5	63	
Pospratenses		15	2_	( <b>6</b> .5	
Rumex acelosa		5	(	3	
Juncie officers	<u> </u>	15	2_	10.5/	
				/25	······································
				183.	
Shrubs:					
<u>,                                      </u>					
	<u> </u>				
Saplings:		†			
	<u> </u>	<b></b>			
Trees:					<u> </u>
			ļ		
The state of the s					
			<b></b>		
	<u> </u>	<u></u> _	<u> </u>		
Percent of Dominant Species that are OBL, FACW, or FAC,	excluding FAC-:		0	<u> </u>	
Remarks:			<del></del>		
_					

Cover class midpoints: T<1% (none): 1 = 1-5% (3.0); 2 = 6-15% (10.5); 3 = 16-25% (20.5); 4 = 26-50% (38.0); 5 = 51-75% (63.0); 6 = 76-15%95% (85.5); 7 = 96-100% (98.0).

To determine the dominant species, first rank the species by the midpoints of their cover classes. Then, cumulatively sum the midpoints of the ranked species until 50% of the total for all species' midpoints (for each layer) is immediately exceeded. All species contributing to that cumulative total plus any additional species having 20% of the total midpoint value should be considered dominants, and marked with an asterisk.

SOILS

ixonomic (		•	Sail Dra	ofile Description	
eplh	Horizon	Matrix Color	Mottle Color	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc
0-4	110112011	1048 4/2	7/248 4/4	$F \in \omega$	
4-13+	-	1			Sondylan
7-15		10483/3	7642414	Common	Loany Sura
44 N. S. a.					
dric Soil	Indicators:		<u> </u>		
	Histosol			Concretions	
	Histic Ep	pipedon	· 4	High Organic Content in	Surface Layer in Sandy Soils
	Sulfidic (	Odor		Organic Streaking in Sar	
	Aquic Mo	oisture Regime	7	Listed on Local Hydric S	oils List
	Reducing	g Conditions		Listed on National Hydri	c Soils List
	Gleyed o	or Low-Chroma Col	ors	Other (Explain in Remark	ks)
emarks:					
,				/nna.aa/	•
			<u></u>	/DROLOGY	
Reco	-	cribe in Remarks):	<u> </u>	Wetland Hydrology Indi	
Reco	Stream, Lal	ke, or Tidal Gage	H	Wetland Hydrology Indi Primary Indicators	:
Reco	Stream, Lal	ke, or Tidal Gage ographs	н	Wetland Hydrology Indi Primary Indicators Inundate	: ed
 	Stream, Lal Aerial Photo Other (Expl	ke, or Tidal Gage ographs lain in Remarks)	н	Wetland Hydrology Indi Primary Indicators Inundate Saturate	: ed ed in upper 12 inches
 	Stream, Lal	ke, or Tidal Gage ographs lain in Remarks)	<u>H1</u>	Wetland Hydrology Indicators  Inundate Saturate  Water M	: ed in upper 12 inches larks
 	Stream, Lal Aerial Photo Other (Expl	ke, or Tidal Gage ographs lain in Remarks)	н	Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water M	: ed ed in upper 12 inches farks es
No F	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs lain in Remarks)	н	Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water M Drift Line Sedimet	: ed ed in upper 12 inches farks es nt Deposits
 	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs lain in Remarks)	H	Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water M Drift Line Sedimel	: ed in upper 12 inches farks es nt Deposits e Patterns in Wetlands
No F	Stream, Lal Aerial Phote Other (Expl Recorded Data	ke, or Tidal Gage ographs lain in Remarks) Available		Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water M Drift Line Sedimel Secondary Indicators	: ed ed in upper 12 inches farks es nt Deposits e Patterns in Wetlands ors (2 or more required);
No F	Stream, Lai Aerial Phote Other (Expl	ke, or Tidal Gage ographs lain in Remarks) Available	inches	Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water M Drift Line Sedimet Drainage Secondary Indicato	: ed ed in upper 12 inches flarks es nt Deposits e Patterns in Wetlands ors (2 or more required); d Root Channels in upper 12 inches
No Field Obse	Stream, Lai Aerial Phote Other (Expl Recorded Data /	ke, or Tidal Gage ographs lain in Remarks) Available	inches	Wetland Hydrology Indicators Primary Indicators Inundate Saturate Water W Drift Line Sedimen Drainage Secondary Indicate Water-S	ed ed in upper 12 inches darks es int Deposits e Patterns in Wetlands ors (2 or more required): d Root Channels in upper 12 inches Stained Leaves
No Field Obse	Stream, Lal Aerial Phote Other (Expl Recorded Data	ke, or Tidal Gage ographs lain in Remarks) Available		Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicato Water-S Local Se	ed ed in upper 12 inches darks es nt Deposits e Patterns in Wetlands ors (2 or more required); d Root Channels in upper 12 inches Stained Leaves oil Survey Data
No Field Obse Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data /	ke, or Tidal Gage ographs lain in Remarks) Available ter: in Pit:	inches	Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicato Water-S Local So	ed ed in upper 12 inches darks es int Deposits e Patterns in Wetlands ors (2 or more required); d Root Channels in upper 12 inches Stained Leaves
No Field Obse Depth Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data rivations:  of Surface Water	ke, or Tidal Gage ographs lain in Remarks) Available ter: in Pit:	inches inches	Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicato Water-S Local So	ed ed in upper 12 inches flarks es nt Deposits e Patterns in Wetlands ors (2 or more required): d Root Channels in upper 12 inches Stained Leaves outral Test
No Field Obse Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data rivations:  of Surface Water	ke, or Tidal Gage ographs lain in Remarks) Available ter: in Pit:	inches inches	Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicato Water-S Local So	ed ed in upper 12 inches harks es
No Field Obse Depth Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data rivations:  of Surface Water	ke, or Tidal Gage ographs lain in Remarks) Available ter: in Pit:	inches inches	Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicato Water-S Local So	ed ed in upper 12 inches harks es
No Field Obse Depth Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data rivations:  of Surface Water	ke, or Tidal Gage ographs lain in Remarks) Available ter: in Pit:	inches inches	Wetland Hydrology Indicators  Inundate Saturate Water M Water M Drift Line Sedimel Drainage Secondary Indicate Water-S Local Se FAC-Ne Other (E	ed ed in upper 12 inches harks es
No Field Obse Depth Depth Depth Depth	Stream, Lai Aerial Phote Other (Expl Recorded Data rivations:  of Surface Water	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit:	inches inches inches  WETLAND	Wetland Hydrology Indicators  Inundate Saturate Water M Water M Drift Line Sedimel Drainage Secondary Indicate Water-S Local Se FAC-Ne Other (E	ed ed in upper 12 inches harks es
No Field Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rvations:  n of Surface Water n to Free Water n to Saturated S	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit:	inches inches inches wetland yes No	Wetland Hydrology Indicators  Inundate Saturate Water M Water M Drift Line Sedimel Drainage Secondary Indicate Water-S Local Se FAC-Ne Other (E	ed ed in upper 12 inches ed in upper 12 inches es es ent Deposits e Patterns in Wetlands ers (2 or more required); ed Root Channels in upper 12 inches estained Leaves entral Test explain in Remarks)
No Field Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rivations:  To Surface Water To Free Water To Saturated S	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit: esent?	inches inches inches  WETLAND	Wetland Hydrology Indicators  Inundate Saturate Water M Water M Drift Line Sedimer Drainage Secondary Indicate Water-S Local Se FAC-Ne Other (E	ed ed in upper 12 inches ed in upper 12 inches elarks es es es ent Deposits e Patterns in Wetlands ers (2 or more required): d Root Channels in upper 12 inches estained Leaves ed Survey Data entral Test explain in Remarks)
No Field Obse Depth Depth Depth Remarks:	Stream, Lai Aerial Photo Other (Expl Recorded Data / rivations:  To Surface Water To Free Water To Saturated S  C Vegetation Press Present?	ke, or Tidal Gage ographs lain in Remarks) Available  ter: in Pit: coil:	inches inches inches wetland yes No	Wetland Hydrology Indicators  Inundate Saturate Water M Drift Line Sedimer Drainage Secondary Indicate Water-S Local Se FAC-Ne Other (E	ed ed in upper 12 inches ed in upper 12 inches elarks es es es ent Deposits e Patterns in Wetlands ors (2 or more required): d Root Channels in upper 12 inches estained Leaves oil Survey Data entral Test Explain in Remarks)

### APPENDIX E: FUNCTION AND VALUE METHODOLOGY

Wetlands are known to perform dynamic roles in many ecosystems, providing intrinsic ecological functions as well as functions having immediate value to society. Although these functions are complex, interrelated, and difficult to assess and quantify, several methods have been developed for wetlands evaluation (Adamus et al. 1987; Reppert et al. 1979; and others). Valuable functions described below include shoreline protection, hydrologic support, storm and flood water storage, ground water exchange, water quality improvement, and natural biologic support.

### Shoreline Protection

Wetlands located along the shorelines of rivers and large bodies of water can reduce the erosive forces of waves and currents. Wetland vegetation prevents erosion by causing waves to break, dissipating wave energy. Physical characteristics that determine the value of wetlands for shoreline protection include vegetation structure and density, and wetland width.

Wetland vegetation, especially tall and rigid plants, dissipate wave energy by causing turbulence as waves pass. Plant roots also bind and stabilize shorelines. More dense and developed root systems provide greater erosion control. Given these two physical factors, wetlands with woody vegetation provide more shoreline protection than areas comprised of emergents or sparsely growing grass. The width of a wetland, or the distance it extends from shoreline, also influences the degree of shoreline protection. Wetlands extending more than 200 yards from shore are given high values, those extending 100 to 200 yards from shore are given moderate ratings, and those extending less than 100 yards from shore are given low ratings. Proximity of wetlands relative to developments is also important when assessing values for shoreline protection. Wetlands along highly developed shorelines provide greater protection of social merit and are given high values. Wetlands along moderately developed shorelines are given moderate values, and those along undeveloped shorelines are given low values.

### Hydrologic Support

Just as the water retention capability of wetlands helps to moderate storm and flood flows and can recharge ground water, the slow release of water from wetlands helps to maintain base flows of streams as well as to maintain a stable water regime in lakes and in the wetland itself. Hydrologic support varies with a wetland's periodicity of saturation, and open or closed drainage system. Permanently saturated or inundated wetlands provide hydrology to streams and lakes continually and are given a high value. Wetlands with seasonal flooding are given moderate values and those that are temporarily saturated are given low values. Open tidal systems provide slow release of waters on a daily basis and are given high values. Wetlands in open drainage systems hold and release waters on a seasonal basis and are given moderate values. Isolated wetlands have little opportunity for hydrologic support and are given low values.

### Storm and Flood Water Abatement

Many wetlands, specifically those hydrologically associated with rivers and streams, are important for water storage and flood retardation during periods of flood or storm water discharge. These wetlands retain high flows, slow flood velocities, and minimize flood peaks. By retaining water that would otherwise be conveyed into open flow channels, wetlands can reduce or modify potentially damaging effects of flood flows downstream. Storm and flood water abatement capability varies with a wetland's size, vegetative cover, and proximity to developed areas. A high value is given to wetlands exceeding 10 acres in size, a moderate value for wetlands from 5 to 10 acres in size, and low values for wetlands less than 5 acres in size. High value for flood retardation is given to wetlands with more than 30 percent woody aerial cover, a moderate value to wetlands with 10 to 30 percent woody aerial cover, and a low value to wetlands with less than 10 percent woody aerial cover. These wetland physical characteristics must be compared to the potential flood damage of adjacent or downstream developments. Thus, a wetland in an urban area would have greater value for this function than a wetland of identical character in a rural or remote setting.

### Ground Water Exchange

Wetlands may be sustained by ground water which approaches the ground surface during some part of the year, in which case they are ground water discharge areas. Other wetlands which are sustained by precipitation or flooding, may be ground water recharge areas. The same wetland may also vary seasonally from being a discharge area to being a recharge area. In theory, this interchange occurs; in practice it is more controversial and difficult to observe. The best application of this function is the seasonal collection of run-off and eventual percolation into an aquifer.

Ground water exchange is determined by a complex system of interactions between the underlying geology, soils, and surface topography. Wetland size, permeability of substrate, dead storage capacity, and inundation frequency all contribute to a wetland's ability for ground water exchange. Values vary directly with wetland size, substrate permeability, dead storage capacity, and inundation frequency, i.e., large wetlands with a permeable substrate and several feet of dead storage are given high values.

### Water Quality Improvement

Wetlands function to naturally purify water by removing organic and mineral particulate matter through a variety of chemical, physical, and biological processes. For example, particles settle out of slowed wetland flow and adhere to dense wetland vegetation. Dense vegetation also enhances the alga and bacterial activity necessary for organic degradation and biochemical uptake of particulate. Wetland conditions may also promote ion exchange which alters chemical pollutants, as well as precipitate chemicals out of the water flow (Reppert et al. 1979). Because wetlands are often transitional systems existing between terrestrial and deep aquatic systems, they can intercept surface water run-off before it reaches open water. Although water quality improvement is relatively subjective, four characteristics can be used to assess the potential for water purification. These characteristics include a wetland's size, inundation regime, vegetative cover, proximity to pollution sources, and its configuration.

Larger wetlands provide a greater surface area for purification processes. Wetlands exceeding 100 acres in size are given high values, those from 10 to 100 acres in size are valued as moderate, and wetlands less than 10 acres in size are valued low for this function. Regular exposure of bottom materials to aerobic decomposition processes increases the breakdown of organic materials. Thus, regularly inundated wetlands such as estuaries are given a high value, Irregularly flooded systems and lakes are given a moderate value, and intermittently flooded systems are given a low value. Since high plant density provides a greater surface area for the processes of water purification, wetlands with more than 80 percent plant cover are given a high value, wetlands with 50 to 80 percent plant cover are given a moderate value, and wetlands with less than 50 percent plant cover are given a low value. The location of a wetland relative to sources of pollution are important when assessing this function. Wetlands located below a known source of point pollution, such as municipal waste, are given a high value. Wetlands located adjacent to or below sources of non-point pollution, such as herbicide, pesticide, or fertilizer sources are given a moderate value. Wetlands that have no proximity to point or non-point sources are given a low value. The configuration of a wetland, including its topographic position, width / depth ratio, and open or closed nature are also important characteristics for this function. A wetland configured to retain more than 50 percent of overland flow is given a high value. A wetland configured to retain 25 to 50 percent of overland flow is given a moderate value, and a wetland retaining less than 25 percent of overland flow is given a low value.

### Natural Biologic Support

Occupying a transitional zone between terrestrial and aquatic environments, wetlands are productive aquatic ecosystems comprised of complex niches for nesting, spawning, rearing, and feeding by many aquatic and terrestrial species. As a basis for food chain productivity and habitats, their natural biologic functions are assessed by their biological production and the habitat they provide.

Biological production of wetlands can be evaluated by their primary productivity, i.e., the rate at which green plants photosynthesize and produce biomass. Since marsh vegetation produces larger amounts of vegetative bio-mass faster than other aquatic communities, marshes are given a high value for this function. Shrub and forested wetlands are given moderate values and wetlands lacking vegetation are given low values. The ability to transport nutrients from biomass decomposition is based on a wetland's hydrologic characteristics. Wetlands exporting more vegetative material, including intertidal marshes or wetlands associated with rivers, are given high values for nutrient transport. A moderate value is given to uppertidal marshes, freshwater wetlands associated with intermittent streams, and some lakes. Low values are given to wetlands that export little vegetative material, such as isolated wetlands or wetlands associated with ephemeral streams.

In addition to biological productivity, wetlands provide habitat for both aquatic and terrestrial organisms. Wetlands are critical for the survival of water-dependent species. For other species, wetlands provide seasonal feeding, rearing, spawning, and cover opportunities that may be critical factors for their survival as well. Criteria used to evaluate the habitat value of wetlands include habitat type diversity, plant community diversity, and special habitat features. Habitat type diversity is a reflection of the communities structure, i.e., its layers, synusiae (morphological layering), and niches that are available for habitat utilization. Plant community diversity is a reflection of the communities plant species diversity, age class diversity, and phenologic expression. Special habitat features are non-living structural components of wetlands, including downed logs, snags, backwaters, undercut banks, etc., that attract a wider range of wildlife species to an area. Wetlands comprised of a greater number of habitat types, plant communities, and special habitat features are given a high value. Those wetlands lacking some of these features are given moderate values, and those wetlands lacking many of these features are given low values.

Wetlands can also provide specialized habitats, or habitats for specialized species, specifically, those that are water dependent or are listed as threatened, endangered, or sensitive. Wetlands providing specialized habitat are recognized as having necessary nesting, spawning, rearing, feeding, and/or wintering opportunities for special wildlife species. Wetlands that are known to support, or have supported in the past, special plant or animal species are given a high value. Wetlands that have the potential to support special species are given a moderate value and wetlands that do not provide habitat suitable for special species are given low values.

These six functions are individually rated low, moderate, or high, based on criteria summarized in the following table. Once individual values are determined, overall values can be determined by interpolating and averaging individual values. These criteria are guidelines compiled from Adamus, Reppert, and others, and professional judgment must be exercised in assessing these criteria.

# Rationale for Wetland Function Evaluation.

	Low Criteria	Moderate Criteria	High Criteria
Shoreline Protection	<ul> <li>sparse herbaceous layer or no vegetation</li> <li>wetland extends &lt; 100 yards from shore</li> <li>located along undeveloped shoreline</li> </ul>	<ul> <li>sparse woody, or dense herbaceous vegetation</li> <li>wetland extends 100 - 200 yards from shore</li> <li>located on moderately developed shoreline</li> </ul>	<ul> <li>dense woody vegetation</li> <li>wetland extends &gt; 200 yards from shore</li> <li>located on highly developed shoreline</li> </ul>
Hydrologic Support	<ul> <li>isolated depression</li> <li>temporary saturation or inundation</li> </ul>	• open drainage system • seasonally flooded	<ul> <li>open tidal system</li> <li>permanent saturation or inundation</li> </ul>
Storm / Flood Water Abatement	size < 5 acres in remote areas < 10 % woody vegetation	• size 5 - 10 acres • in rural area; • 10 - 30 % woody vegetation	• size > 10 acres • in urban areas • > 30 % woody vegetation
Groundwater Exchange	• size < 5 acres • isolated depressions • temporarily saturated or inundated • Impermeable substrate	• size 5 - 10 acres • seasonally flooded open system • permanent shallow inundation • semipermeable substrate	<ul> <li>size &gt; 10 acres</li> <li>permanently flooded system</li> <li>deep inundation</li> <li>permeable substrate</li> </ul>
Water Quality Improvement	<ul> <li>intermittently flooded wetland</li> <li>50 % vegetation density</li> <li>size &lt; 10 acres</li> <li>no proximity to non-point pollutants</li> <li>retains &lt; 25 % of overland runoff</li> </ul>	<ul> <li>lakes</li> <li>50 - 80 % vegetation density</li> <li>size 10 - 100 acres</li> <li>downstream from nonpoint discharge</li> <li>retains 25 - 50 % of overland runoff</li> </ul>	• estuary or perennial stream • > 80 % vegetation density • size > 100 acres • downstream from municipal point discharges • retains > 50 % of overland runoff
Natural Biologic Support	vegetation lacking     isolated systems     wetland associated with ephemeral streams     low plant community diversity     single synuslae     special habitat features lacking     no unique species     no water-dependent species     relatively small size     adjacent to minor fishery	shrub / forested swamp     upper tidal marsh     wetland associated with intermittent streams     moderate plant community diversity     several synusiae     special habitat features present     unique species potentially present     has water- dependent species potential     relatively medium size     adjacent to valuable fishery	<ul> <li>marsh or bog</li> <li>intertidal marshes</li> <li>wetland associated with permanent streams</li> <li>high plant community diversity</li> <li>many synusiae</li> <li>complex special habitat features present</li> <li>unique species present</li> <li>water-dependent species present</li> <li>relatively large size</li> <li>adjacent to significant fishery</li> </ul>

\*\* Table compiled by SELKIRK ENVIRONMENTAL, 1993

## APPENDIX F: FUNCTION AND VALUE WORK SHEETS

	· PEMIZ	50,70
'etiand #	: + 21MC C	3084

Field Rating Form for Wetland Function Evaluation\*\*

Project: SMR 104 Date: Sap 18

Criteria for Criteria for Criteria for **High Value** Moderate Value Low Value dense woody vegetation sparse woody or dense herbaceous veg. sparse herbaceous layer or no vegetation wetland extends > 200 yards from shore wetland extends 100-200 yards from shore Shoreline wetland extends < 100 yards from shore located on highly developed shoreline located along undeveloped shoreline located on moderately developed shoreline Protection open tidal system open drainage system isolated depression Hydrologic permanent saturation or inundation seasonally flooded Support temporary saturation or inundation MOSPATE size > 10 acres size 5 - 10 acres size < 5 acres in urban settings in rural settings in remote settings Storm / Flood 10 - 30 % woody vegetation > 30 % woody vegetation Water < 10 % woody vegetation MODERATE **Abatement** size > 10 acres size 5 - 10 acres size < 5 acres permanently flooded system seasonally flooded open system Groundwater isolated depressions deep inundation permanent shallow inundation temporarily saturated or inundated Exchange impermeable substrate CLARKIA CLA permeable substrate semipermeable substrate 3745300M 6W estuary or perennial stream intermittently flooded wetland lakes > 80 % vegetation density 50 - 80 % vegetation density < 50 % vegetation density size > 100 acres size 10 - 100 acres size < 10 acres Water Quality downstream from municipal point discharge downstream from non-point discharge no proximity to non-point discharge Improvement retains 25 - 50 % of overland runoff retains > 50 % of overland flow retains < 25 % of overland runoff MODERATE marsh or bog shrub / forested swamp vegetation lacking intertidal marshes upper tidal marsh isolated system associated with permanent stream associated with intermittent stream associated with ephemeral streams Natural high plant community diversity low plant community diversity moderate plant community diversity **Biologic** many synusiae several synusiae single synusiae Support complex special habitat features present special habitat features present special habitat features lacking unique species present unique species potentially present no unique species water dependent species present water dependent species potential no water dependent species relatively large size relatively medium size relatively small size adjacent to significant fishery adjacent to minor fishery adjacent to valuable fishery

COM = WOD

Table compiled by SELKIRK ENVIRONMENTAL, 1993.

Hand #: PEMIER 22.0 AC Field Rating Form for Wetland Fu

Field Rating Form for Wetland Function Evaluation\*\*

Project: Sw2 404 Date: Sep 18

sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore located along undeveloped shoreline  isolated depression temporary saturation or inundation  size < 5 acres in remote settings < 10 % woody vegetation  size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLARK	sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore located on moderately developed shoreline  open drainage system - TENBS seasonally flooded  size 5 - 10 acres in rural settings 10 - 30 % woody vegetation  MODERTE  size 5 - 10 acres seasonally flooded open system permanent shallow inundation	open tidal system permanent saturation or inundation  size > 10 acres in urban settings > 30 % woody vegetation  size > 10 acres permanently flooded system deep inundation
size < 5 acres in remote settings < 10 % woody vegetation  size < 5 acres isolated depressions temporarily saturated or inundated	size 5 - 10 acres in rural settings 10 - 30 % woody vegetation MODERTE  size 5 - 10 acres seasonally flooded open system permanent shallow inundation	size > 10 acres in urban settings > 30 % woody vegetation   size > 10 acres permanently flooded system deep inundation
isolated depressions temporarily saturated or inundated	size 5 - 10 acres seasonally flooded open system permanent shallow inundation	permanently flooded system deep inundation
	semipermeable substrate	permeable substrate
intermittently flooded wetland < 50 % vegetation density size < 10 acres no proximity to non-point discharge retains < 25 % of overland runoff	lakes 50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge retains 25 - 50 % of overland runoff	estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge retains > 50 % of overland flow
vegetation lacking isolated system associated with ephemeral streams low plant community diversity single synusiae special habitat features lacking no unique species no water dependent species relatively small size	shrub / forested swamp upper tidal marsh associated with intermittent stream moderate plant community diversity several synusiae special habitat features present unique species potentially present water dependent species potential relatively medium size	marsh or bog intertidal marshes associated with permanent stream high plant community diversity many synusiae complex special habitat features present unique species present water dependent species present relatively large size adjacent to significant fishery
	< 50 % vegetation density size < 10 acres no proximity to non-point discharge retains < 25 % of overland runoff vegetation lacking isolated system associated with ephemeral streams low plant community diversity single synusiae special habitat features lacking no unique species no water dependent species	<ul> <li>&lt; 50 % vegetation density</li> <li>size &lt; 10 acres</li> <li>no proximity to non-point discharge</li> <li>retains &lt; 25 % of overland runoff</li> <li>vegetation lacking</li> <li>isolated system</li> <li>associated with ephemeral streams</li> <li>low plant community diversity</li> <li>single synusiae</li> <li>special habitat features lacking</li> <li>no unique species</li> <li>no water dependent species</li> <li>relatively small size</li> <li>50 - 80 % vegetation density</li> <li>size 10 - 100 acres</li> <li>downstream from non-point discharge</li> <li>retains 25 - 50 % of overland runoff</li> <li>shrub / forested swamp</li> <li>upper tidal marsh</li> <li>associated with intermittent stream</li> <li>moderate plant community diversity</li> <li>several synusiae</li> <li>special habitat features present</li> <li>unique species potentially present</li> <li>water dependent species potential</li> <li>relatively medium size</li> </ul>

Table compiled by SELKIRK ENVIRONMENTAL, 1993.

etland #	: PEMI	F	4.4	AC

Field Rating Form for Wetland Function Evaluation\*\*

ind#: PEM	11	4.4 AC		Project: 5	YK-10	<u> </u>
	0 v n e s r i a t l e l	Criteria for Low Value	0 v n e s r i a t i e i	Criteria for Moderate Value	0 N n 6 s 1 i a t e	Criteria for  High Value
Shoreline		sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore		sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore	H	dense woody vegetation wetland extends > 200 yards from shore
Protection		located along undeveloped shoreline		located on moderately developed shoreline $\mathcal{N}/\mathcal{R}$		located on highly developed shoreline
lydrologic Support		isolated depression temporary saturation or inundation		open drainage system seasonally flooded Mののもいろてき		open tidal system permanent saturation or inundation
orm / Flood Water Abatement	工工工	size < 5 acres in remote settings < 10 % woody vegetation		size 5 - 10 acres in rural settings 10 - 30 % woody vegetation WODERATE		size > 10 acres in urban settings > 30 % woody vegetation
roundwater Exchange		size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLAY		size 5 - 10 acres seasonally flooded open system permanent shallow inundation semipermeable substrate  OW - MODERATE		size > 10 acres permanently flooded system deep inundation permeable substrate
ater Quality	X	intermittently flooded wetland < 50 % vegetation density size < 10 acres no proximity to non-point discharge retains < 25 % of overland runoff	X	lakes 50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge retains 25 - 50 % of overland runoff		estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge retains > 50 % of overland flow
Natural Biologic Support		vegetation lacking isolated system associated with ephemeral streams low plant community diversity single synusiae special habitat features lacking		shrub / forested swamp upper tidal marsh associated with Intermittent stream moderate plant community diversity several synusiae special habitat features present	X	marsh or bog intertidal marshes associated with permanent stream high plant community diversity many synusiae complex special habitat features present
	X	no unique species no water dependent species		unique species potentially present water dependent species potential	H	unique species present water dependent species present

relatively medium size

adjacent to valuable fishery

MODERATE

relatively large size

adjacent to significant fishery

relatively small size

adjacent to minor fishery

etland #: PEMIH - 2.2AC

Field Rating Form for Wetland Function Evaluation\*\*

Project: Study of Date: Sep 78

	o o v n e conteria for i a com Value t i e i	o v n e s r Criteria for i a Moderate Value t i e i	o v n e s r Criteria for l a High Value t I e l
Shoreline Protection	sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore located along undeveloped shoreline	sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore located on moderately developed shoreline	dense woody vegetation wetland extends > 200 yards from shore located on highly developed shoreline
Hydrologic Support	isolated depression temporary saturation or inundation	open drainage system seasonally flooded	open tidal system permanent saturation or inundation
Storm / Flood Water Abatement	size < 5 acres in remote settings < 10 % woody vegetation	size 5 - 10 acres in rural settings 10 - 30 % woody vegetation	size > 10 acres in urban settings > 30 % woody vegetation
Groundwater Exchange	size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLAYS	size 5 - 10 acres seasonally flooded open system permanent shallow inundation semipermeable substrate	size > 10 acres permanently flooded system deep inundation permeable substrate
Water Quality Improvement	intermittently flooded wetland < 50 % vegetation density size < 10 acres no proximity to non-point discharge retains < 25 % of overland runoff	lakes  50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge retains 25 - 50 % of overland runoff	estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge retains > 50 % of overland flow
Natural Biologic Support	vegetation lacking isolated system associated with ephemeral streams low plant community diversity single synusiae special habitat features lacking no unique species no water dependent species	shrub / forested swamp upper tidal marsh associated with intermittent stream moderate plant community diversity several synusiae special habitat features present unique species potentially present water dependent species potential relatively medium size	marsh or bog intertidal marshes associated with permanent stream high plant community diversity many synusiae complex special habitat features present unique species present water dependent species present relatively large size
	relatively small size adjacent to minor fishery	adjacent to valuable fishery  MoDERATE	adjacent to significant fishery

<sup>\*</sup> Table compiled by SELKIRK ENVIRONMENTAL, 1993.

etland # : PSS12 33.2AC

Field Rating Form for Wetland Function Evaluation\*\*

Project: SNEHCH Date: Sap 18

	o v n e s r i a Low Value t !	0 0 v n e s r i a t ! e !	Criteria for Moderate Value	0 0 V n e s t i a t ! e !	Criteria for High Value
Shoreline Protection Hydrologic Support	sparse herbaceous layer or no wetland extends < 100 yards for located along undeveloped she isolated depression temporary saturation or inundation.	om shore voreline vo	sparse woody or dense herbaceous veg wetland extends 100-200 yards from sh ocated on moderately developed shore NA open drainage system seasonally flooded MODERNE	ore	dense woody vegetation wetland extends > 200 yards from shore located on highly developed shoreline open tidal system permanent saturation or inundation
Storm / Flood Water Abatement	size < 5 acres in remote settings < 10 % woody vegetation  size < 5 acres isolated depressions		size 5 - 10 acres in rural settings 10 - 30 % woody vegetation  MODERNE size 5 - 10 acres seasonally flooded open system		size > 10 acres in urban settings > 30 % woody vegetation  size > 10 acres permanently flooded system
Groundwater Exchange	temporarily saturated or inund impermeable substrate 444 intermittently flooded wetland	ated I	permanent shallow inundation semipermeable substrate LDND - MODREATE lakes		deep inundation permeable substrate  estuary or perennial stream > 80 % vegetation density
Water Quality Improvement	< 50 % vegetation density size < 10 acres no proximity to non-point disc retains < 25 % of overland run	harge	50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge retains 25 - 50 % of overland runoff  MODERNE		size > 100 acres downstream from municipal point discharge retains > 50 % of overland flow
Natural Biologic Support	vegetation lacking isolated system associated with ephemeral sti low plant community diversity single synusiae special habitat features lackly no unique species no water dependent species	reams	shrub / forested swamp upper tidal marsh associated with intermittent stream moderate plant community diversity several synusiae special habitat features present unique species potentially present water dependent species potential	X	marsh or bog intertidal marshes associated with permanent stream high plant community diversity many synusiae complex special habitat features present unique species present water dependent species present
	relatively small size adjacent to minor fishery		relatively medium size adjacent to valuable fishery MODEEATS		relatively large size adjacent to significant fishery

<sup>\*</sup> Table compiled by SELKIRK ENVIRONMENTAL, 1993.

etland #:	) <u>ss</u> (F	2.9 AC	Field Rating	Form for	wetland	runc

ction Evaluation\*\*
Project: Sw2 404 Date: Sep 78

	o o v n e s r Criteria for i a Low Value t l e l	o o v n e s r Criteria for i a Moderate Value t i e I	o v n e s r High Value t ! e I
Shoreline Protection Hydrologic	sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore located along undeveloped shoreline isolated depression	sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore located on moderately developed shoreling  / / / /	e located on highly developed shoreline open tidal system
Support Storm / Flood Water	temporary saturation or inundation  size < 5 acres in remote settings < 10 % woody vegetation	seasonally flooded  WODERATE  size 5 - 10 acres in rural settings  10 - 30 % woody vegetation	permanent saturation or inundation  size > 10 acres in urban settings > 30 % woody vegetation
Abatement Groundwater Exchange	size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLAY	size 5 - 10 acres  seasonally flooded open system permanent shallow inundation semipermeable substrate	size > 10 acres permanently flooded system deep inundation permeable substrate
Water Quality Improvement	intermittently flooded wetland < 50 % vegetation density size < 10 acres no proximity to non-point discharge	lakes 50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge	estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge
Natural	retains < 25 % of overland runoff  vegetation lacking isolated system associated with ephemeral streams	retains 25 - 50 % of overland runoff  www - Mos  shrub / forested swamp  upper tidal marsh associated with intermittent stream moderate plant community diversity	retains > 50 % of overland flow  marsh or bog intertidal marshes associated with permanent stream high plant community diversity
Biologic Support	low plant community diversity single synusiae special habitat features lacking no unique species no water dependent species relatively small size	several synusiae special habitat features present unique species potentially present water dependent species potential relatively medium size	many synusiae complex special habitat features present unique species present water dependent species present relatively large size
	adjacent to minor fishery	adjacent to valuable fishery  MODERATE	adjacent to significant fishery

<sup>&#</sup>x27; Table compiled by SELKIRK ENVIRONMENTAL, 1993.

etland#:	PFO	12	176	Ac

Field Rating Form for Wetland Function Evaluation\*\*

Project: SNR 404 Date: Sap 78

Criteria for Criteria for Criteria for **High Value** Moderate Value **Low Value** dense woody vegetation sparse woody or dense herbaceous veg. sparse herbaceous layer or no vegetation wetland extends > 200 yards from shore wetland extends 100-200 yards from shore wetland extends < 100 yards from shore Shoreline located on highly developed shoreline located on moderately developed shoreline located along undeveloped shoreline Protection open tidal system open drainage system isolated depression Hydrologic permanent saturation or inundation seasonally flooded temporary saturation or inundation Support MODERATE size > 10 acres size 5 - 10 acres size < 5 acres in urban settings in rural settings in remote settings Storm / Flood > 30 % woody vegetation 10 - 30 % woody vegetation < 10 % woody vegetation Water MOD -HIGH Abatement size > 10 acres size 5 - 10 acres size < 5 acres permanently flooded system seasonally flooded open system isolated depressions Groundwater deep inundation permanent shallow inundation temporarily saturated or inundated Exchange permeable substrate impermeable substrate CLARKIA CLAY semipermeable substrate ram-was estuary or perennial stream lakes intermittently flooded wetland > 80 % vegetation density 50 - 80 % vegetation density < 50 % vegetation density size > 100 acres size 10 - 100 acres size < 10 acres Water Quality downstream from municipal point discharge downstream from non-point discharge no proximity to non-point discharge Improvement retains > 50 % of overland flow retains 25 - 50 % of overland runoff retains < 25 % of overland runoff COM-WOD marsh or bog shrub / forested swamp vegetation lacking intertidal marshes upper tidal marsh isolated system associated with permanent stream associated with intermittent stream associated with ephemeral streams Natural high plant community diversity moderate plant community diversity low plant community diversity **Biologic** many synusiae several synusiae single synusiae Support complex special habitat features present special habitat features present special habitat features lacking unique species present unique species potentially present no unique species water dependent species present water dependent species potential no water dependent species relatively large size relatively medium size relatively small size adjacent to significant fishery adjacent to valuable fishery adjacent to minor fishery MODER ATG

tland#	· POW	1+	0500
	• • · · · · / · · • · · · · · · · · · ·		

Field Rating Form for Wetland Function Evaluation\*\*

Project: SME 104 Date: Sep 98

tland # : POM			o
	Criteria for Low Value	o v n e s r i a Moderate Value t I e i	o v n e s r Criteria for i a High Value t I e I
Shoreline Protection	sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore located along undeveloped shoreline	sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore located on moderately developed shoreline  Open drainage system	open tidal system
Hydrologic Support	isolated depression temporary saturation or inundation	seasonally flooded	permanent saturation or inundation  size > 10 acres in urban settings
Storm / Flood Water Abatement	in remote settings < 10 % woody vegetation	in rural settings 10 - 30 % woody vegetation OVN size 5 - 10 acres	> 30 % woody vegetation  size > 10 acres
Groundwater Exchange	size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLAY	seasonally flooded open system permanent shallow inundation semipermeable substrate	permanently flooded system deep inundation permeable substrate
Water Quality Improvement	intermittently flooded wetland < 50 % vegetation density size < 10 acres no proximity to non-point discharge retains < 25 % of overland runoff	lakes 50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge retains 25 - 50 % of overland runoff	estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge retains > 50 % of overland flow
Natural Biologic Support	vegetation lacking isolated system associated with ephemeral streams low plant community diversity single synusiae special habitat features lacking no unique species no water dependent species relatively small size adjacent to minor fishery	shrub / forested swamp upper tidal marsh associated with intermittent stream moderate plant community diversity several synusiae special habitat features present unique species potentially present water dependent species potential relatively medium size adjacent to valuable fishery	marsh or bog intertidal marshes associated with permanent stream high plant community diversity many synusiae complex special habitat features present unique species present water dependent species present relatively large size adjacent to significant fishery

etland #: OVERALL 133.0DAC  Field Rating Form for Wetland Function Evaluation**  53:07 Accord 179.3A enact  Project: SMR 401 Date: Sep 78							
	o v n e s r i a t l e i	Criteria for Low Value	O V n e s r i a t i e i	Criteria for Moderate Value	o v n e s r i a t i e i	Criteria for High Value	
Shoreline Protection	2-1	sparse herbaceous layer or no vegetation wetland extends < 100 yards from shore located along undeveloped shoreline		sparse woody or dense herbaceous veg. wetland extends 100-200 yards from shore located on moderately developed shoreline	X	dense woody vegetation wetland extends > 200 yards from shore located on highly developed shoreline	
Hydrologic Support	T	isolated depression temporary saturation or inundation		open drainage system seasonally flooded  WORRE		open tidal system permanent saturation or inundation	
Storm / Flood Water Abatement		size < 5 acres in remote settings < 10 % woody vegetation	X	size 5 - 10 acres in rural settings 10 - 30 % woody vegetation MODERATE		size > 10 acres in urban settings > 30 % woody vegetation	
Groundwater Exchange	Ž	size < 5 acres isolated depressions temporarily saturated or inundated impermeable substrate CLARKIA CLAY	X	size 5 - 10 acres seasonally flooded open system permanent shallow inundation semipermeable substrate	X	size > 10 acres permanently flooded system deep inundation permeable substrate	
Water Quality	X	intermittently flooded wetland < 50 % vegetation density size < 10 acres	X	Iakes 50 - 80 % vegetation density size 10 - 100 acres downstream from non-point discharge		estuary or perennial stream > 80 % vegetation density size > 100 acres downstream from municipal point discharge	
Improvement	X	no proximity to non-point discharge retains < 25 % of overland runoff		retains 25 - 50 % of overland runoff  MODERTE  shrub / forested swamp		retains > 50 % of overland flow  marsh or bog	
Natural Biologic Support		isolated system associated with ephemeral streams low plant community diversity single synusiae		upper tidal marsh associated with Intermittent stream moderate plant community diversity several synusiae		intertidal marshes associated with permanent stream high plant community diversity many synusiae	
<b></b>		special habitat features lacking no unique species no water dependent species relatively small size		special habitat features present unique species potentially present water dependent species potential relatively medium size		complex special habitat features present unique species present water dependent species present relatively large size	
		adjacent to minor fishery	X	adjacent to valuable fishery かからーはいらは		adjacent to significant fishery	

<sup>&#</sup>x27; Table compiled by SELKIRK ENVIRONMENTAL, 1993.